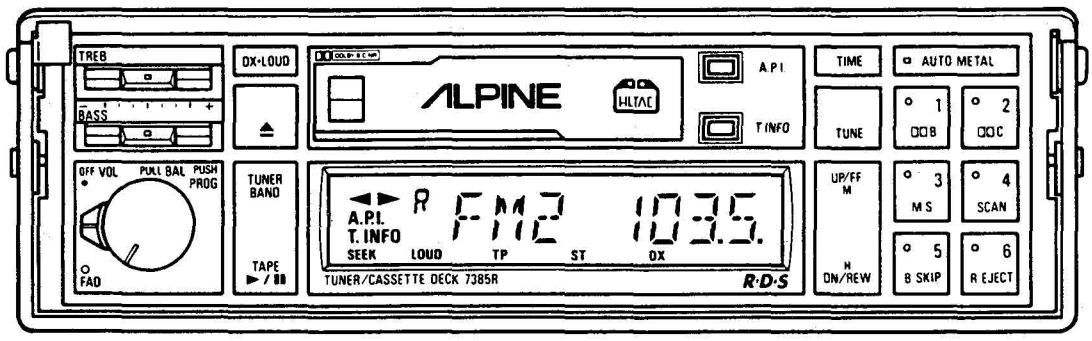
ALPINE SERVICE MANUAL

Digital FM/MW/LW Cassette

- "For the cassette deck mechanism parts (GZ75E230) of this model, refer to the GZ Series Service Manual (part No. 68P80518F04)."



7385R

Contents

Specifications 3
Introduction 4
Controls & Indicators ..... 4 to 5
Features 6
Connections 7
Installations ..... 8 to 9
Precautions 10
Operation ..... 10 to 14
Disassembly Instructions ..... 15 to 16
Adjustment Procedures 17
Adjustment Locations ..... 17 to 18
Block Diagram 19
Tuner Schematic Diagram 20
Schematic Diagram ..... 21 to 30
Parts Layout on P.C.Boards and Wiring Diagram ..... 31 to 37
Electrical Parts List ..... 41 to 49
Cabinet Assembly Parts List 50
Exploded View (Cabinet) ..... 51 to 52
Packing Assembly Parts List 53
Packing Method View 53
Semi-Conductor Lead Indentifications ..... 54 to 61

Specifications

〈FM RADIO〉

Intermediate Frequency .....10.7±0.1MHz
Frequency Range .....87.5 to 108.0MHz
Usable Sensitivity (Stereo, 98.1MHz) 17.2dBf
S/N Ratio 50dB
Image Rejection (at 106.1MHz) 40dB
IF Rejection (at 90.1MHz) 60dB
Distortion (Input 1mV at 98.1MHz) 1%
Frequency Response .....100Hz: 0±3db
10KHz: −12±3dB
Stereo Separation (at 1000Hz) 25dB

〈MW RADIO〉

Intermediate Frequency .....450±5kHz
Frequency Range .....531±1602kHz
Sensitivity 20dB S/N (at 999kHz) 45.2dBf
S/N Ratio (at 999kHz) 44dB
Image Rejection (at 1404kHz) 45dB
IF Rejection (at 603kHz) 60dB
Distortion (at 999kHz) 1%
Frequency Response .....100Hz: −3±5dB
4kHz: −12±6dB

〈LW RADIO〉

Intermediate Frequency .....450±5kHz
Frequency Range .....153 to 281kHz
Sensitivity 20dB S/N (at 216kHz) 52.2dBf
Image Rejection (at 270kHz) 40dB
IF Rejection (at 216kHz) 50dB
Distortion (at 216kHz) 2%
Frequency Response .....100Hz: −3±3dB
4kHz: −12±6dB

〈TAPE PLAYER〉

Wow & Flutter (JIS, WRMS/MTT-111) 0.15%
Tape Speed (MTT-111) ..4.76cm/sec +3 to −1%
S/N Ratio .....Dolby OFF: 50dB
Dolby B: 58dB
Dolby C: 65dB
Distortion (MTT-118) 2.5%
Frequency Response (Ref 1000Hz, MTT-256)
.....50Hz: −3dB
18kHz: −3dB
Separation (MTT-141) 30dB
Crosstalk (MTT-121) 45dB
FF & RWD Time (C-60) .....100sec.

〈GENERAL〉

Power Supply .....14V DC
Pre Output Voltage 1.2V
Load Impedance 10kohm
Semiconductors .....24IC's, 66Transistors,
30 Diodes, 22 Zener Diodes
Dimension (W×H×D) Chassis: 178×50×153mm
Nose: 178×50×15mm
Weight 1.7kg

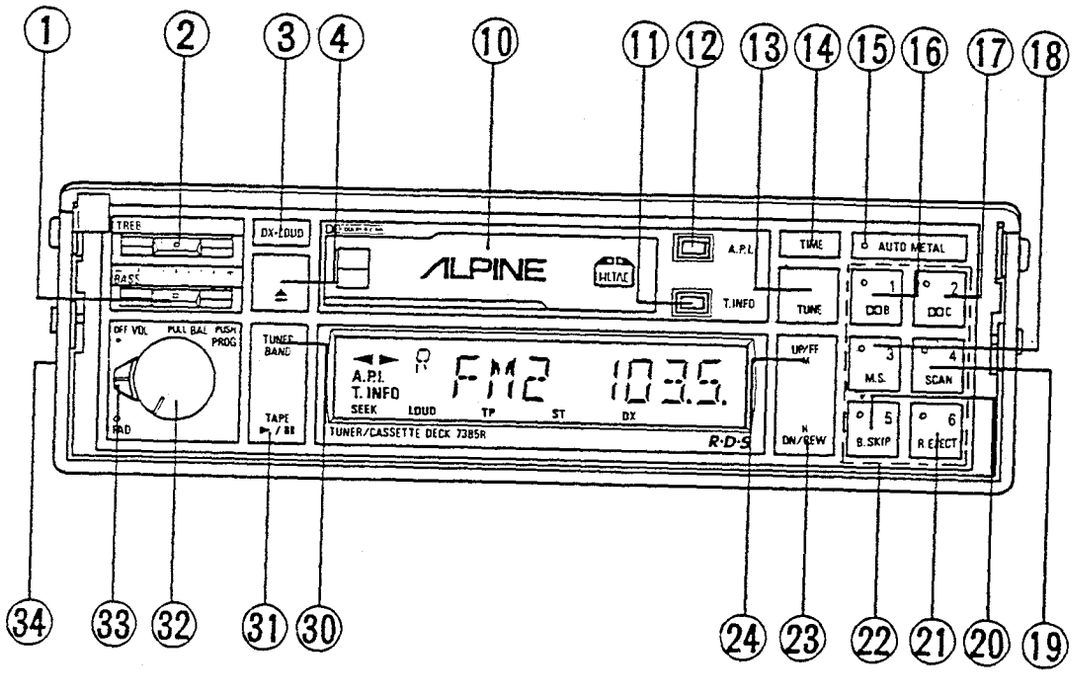
INTRODUCTION

The 7385R FM/MW/LW Cassette player features Alpine's latest technology and design. It utilizes our T-10 II Tuner with digital phase-locked loop frequency synthesizer and an auto-reverse cassette player.

The 7385R was designed for in-dash installation in vehicles with 12-volt, negative ground electrical systems. it houses an array of features such as an illuminated computer-like control keyboard, RDS (Radio Data System) which offers a variety of information and automatic re-tuning function in its DIN size chassis. It also includes Alpine's exclusive Quick Release Bracked (QRB) with a reinforced connector, that allows easy removal of the radio as an anti-theft measure. Please read this owner's manual thoroughly to familiarize yourself with all the features and operation of the 7385R.

CONTROLS & INDICATORS

①BASS Control and Indicator
②TREBle Control and Indicator
③DX (Local/Distance)/LOUDness Button
④Eject Button
⑤A.P.I (Auto Programme Identification) Indicator
⑥Tape Direction Indicators
⑦T. INFO (Traffic Information) Indicator
⑧R (Radio Data System) Indicator
⑨Digital Display
⑩Cassette Loading Slot
⑪T. INFO (Traffic Information) Button
⑫A.P.I (Auto Programme Identification) Button
⑬Seek/TUNE Button
⑭TIME Button
⑮AUTO METAL Indicator
⑯DOLBY B NR Button/Indicator (Tape Mode)
⑰DOLBY C NR Button/Indicator (Tape Mode)
⑱M.S. (Music Sensor) Button/Indicator (Tape Mode)
⑲SCAN Button/Indicator (Tape Mode)
⑳B. SKIP (Blank Skip) Button/Indicator (Tape Mode)
㉑R. EJECT (Return Eject) Button/Indicator (Tape Mode)
㉒Station Preset Buttons/Preset Address Indicators (Radio Mode)
㉓Tape REW/Tuning DowN/Hour Button
㉔Tape FF/Tuning UP/Minute Button
㉕DX Indicator
㉖FM STereo Reception Indicator
㉗TP (Traffic Programme) Indicator
㉘LOUDness Indicator
㉙SEEK Tuning Indicator
㉚TUNER BAND Select Button
㉛TAPE Play/Pause (▶/II) Button
㉜Power On/OFF Switch/VOLume Control/BALance Control (Pull)/PROGramme Button (Push)
㉝FADer Control
㉞Volume Up Control for Traffic Information Reception (on the left side)


ALPINE
A.P.I.
T.INFO
TIME
TUNE
AUTO METAL
DOB
DOC
M.S.
SCAN
B.SKIP
REJECT
TUNER BAND
TAPE
A.P.I.
T. INFO
SEEK
LOUD
TP
ST
DX
FM2
103.5.
TUNER/CASSETTE DECK 7385R
R·D·S

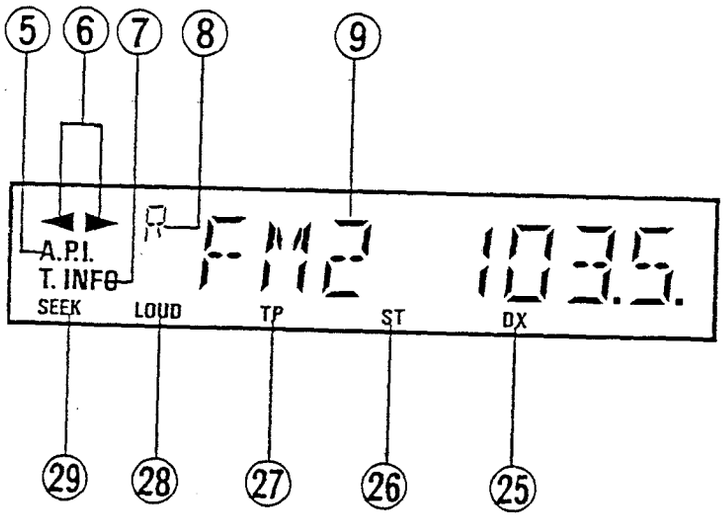

A.P.I.
T. INFO
SEEK
LOUD
TP
ST
DX
FM2
103.5.

Figure 1

FEATURES

- **FULL FRONT DIN™**
- **QUICK RELEASE BRACKET (Q.R.B.)**
  Alpine's exclusive QRB design allows for easy removal of the 7385R while maintaining memory backup. The 7385R may then be carried with the owner for theft prevention. This QRB also provides for easy reinstallation of the unit.
- **T-10 II TUNER**
  Alpine's premier tuner utilizes several innovative circuits to ensure stable, noise-free FM reception in both strong and weak signal areas.
- **HLTAC™ TAPE HEAD**
  The HLTAC tape head provides an exceptionally flat frequency response.
- **DOLBY® TYPE B AND C NOISE REDUCTION**
  This system lowers background noise by 10 dB in Dolby* B or by 20 dB in Dolby C compared with playing the tape with no noise reduction.
- **TAPE SCAN**
  In this mode the deck quickly scans through the tape and plays the first ten seconds of each music selection. When you locate the selection of your choice, press the switch again to defeat the tape scan.
- **DUAL PRE-AMP OUTPUTS**
  The 7385R allows you to expand your system easily with Front and Rear RCA Outputs and PREAMP Fader.
- **A.P.I. (Auto Programme Identification)**
  This feature allows you to show the RDS (Radio Data System) station name (instead of the frequency) in the display for easier identification of the selected station. In the A.P.I. mode, the unit automatically tunes to the strongest station within the RDS network or in another RDS network.
- **T. INFO (Traffic Information)**
  The 7385R is equipped with traffic information receiving circuit which allows you to receive the traffic information in FM.
- **R. (Return) Eject**
  Cassette being played will be automatically ejected after playing the A and B sides of the tape.
- **MUSIC SENSOR (M.S.)**
  Activating the MUSIC SENSOR (tape mode only) allows you to skip ahead to the beginning of the next musical section on the tape or return to the beginning of the current musical section.
- **IGNITION "KEY-OFF" PAUSE**
  When the ignition is turned off, the tape head and pinch roller disengage from the tape while the cassette remains inside the deck.
- **AUTOMATIC METAL TAPE SELECTOR**
  When a metal cassette tape is inserted, the tape mechanism automatically adjusts to metal tape equalization.
- **TAPE PAUSE**
  When activated, the tape head and pinch roller disengage from the tape while the cassette remains inside the deck. This is used to temporarily stop tape playback. The mode automatically switches from tape to radio.
- **AUTO SEEK UP/DOWN TUNING**
  Automatically tunes to the next higher frequency or lower frequency and locks on that station.
- **PRESET ADDRESS**
  The indicator on any of the Lite Touch™ preset switches will light when you press them. This lets you know which preset station is selected (in the Tuner mode.)
- **AUTO BLANK SKIP**
  This function senses a non recorded portion continuing for more than 15 seconds on the tape and fast forwards to a beginning of next section or to the tape end.
- **DIGITAL PLL FREQUENCY SYNTHESIZER**
- **LITETOUCH™ 24-STATION PRESET**
  FM 1 : 6, FM 2 : 6, MW : 6, LW : 6.

* Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

CONNECTIONS

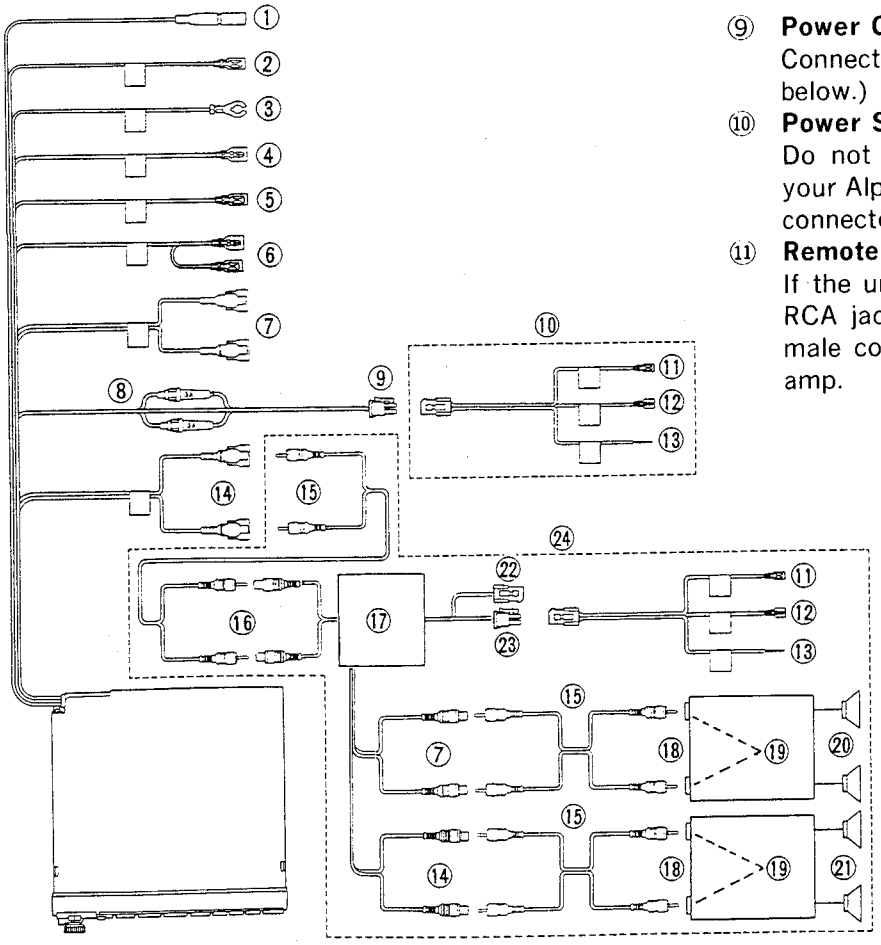


Figure 2

① **Antenna Receptacle**
② **Power Antenna Lead (BLUE)**
③ **Ground Lead (BLACK)**
This lead is to be connected to the car chassis securely.
④ **Audio Interrupt Out Lead (PINK/WHITE)**
Connect this lead to the Audio Interrupt In lead of Alpine CD player (if you interconnect Alpine CD player.)
⑤ **Audio Interrupt In Lead (PINK/WHITE)**
Applying (+)12V to this lead mutes the audio output. This works well when connecting the 7385R with Cellular Phone equipped with Audio Interface output. Removing (+)12V from this lead deactivates the muting circuit.
⑥ **Dimmer Control Lead (WHITE/BLUE)**
This lead is for connection to a rheostat such as the dashboard light dimmer in your vehicle. Applying (+)12V to this lead causes the maximum dimming. Varying the voltage controls the brightness of the display. This allows you to dim the unit's display with the dashboard lights.
⑦ **RCA Output Connectors (Rear)**
⑧ **Fuse Holders**
⑨ **Power Connector**
Connect to Power Supply Connector (item 10 below.)
⑩ **Power Supply Connector**
Do not use this connector when you connect your Alpine CD player etc. Use the power supply connector of the CD player etc.
⑪ **Remote On Lead (BLUE/WHITE)**
If the unit is connected to your Amp unit with RCA jacks, connect the remote On lead to the male connector of the remote On lead of your amp.
⑫ **ACC Power Lead (Ignition) (RED)**
This lead is to be connected to an ignition terminal in the vehicle's fuse box or a terminal which develops +12V when the ignition is turned on.
⑬ **Battery Lead (YELLOW)**
Connect this lead to the positive (+) post of the vehicle's battery.
⑭ **RCA Output Connectors (Front)**
⑮ **Extension Cable (Option)**
⑯ **RCA Input Connectors**
⑰ **Other ALPINE CD Player**
⑱ **Amplifier**
⑲ **RCA Input**
⑳ **Front Speakers**
㉑ **Rear Speakers**
㉒ **AUX. POWER Connector**
㉓ **MAIN POWER Connector**
㉔ **Connections with other Alpine unit (such as CD player)**

CAUTION :
Before connecting any wire, set the unit to the off position by fully turning the power on/OFF switch counterclockwise.

INSTALLATION

1. Remove the unit from the bracket by raising the handle.
2. Connect the lead wires coming from the left rear of the bracket by referring to the Connection Section, then slide the bracket into the dashboard. Bend out the tabs along the top, bottom, and sides of the bracket to strengthen the mounting.
3. Install the metal mounting (back) strap supplied, as shown in Fig. 3. The strap can be attached to the vehicle above or below the QRB bracket.
4. Fully insert the unit into the bracket and push the handle downward to lock the unit. To remove the unit, raise the handle to unlock the pins, and firmly pull the unit toward you. If the handle is not easy to raise by hand, press the Handle lever(▲) (Fig. 3).

Note :

1. Secure the ground lead of the bracket to a clean, bare metal spot using a screw (★) already attached to the car chassis (Fig. 4).
2. Always reinforce the installation of a removable head unit's bracket with the metal mounting strap (Fig. 3). Otherwise, after repeated removal and insertion of the unit, the bracket may become loose in the dashboard.
3. Before operating the unit, make sure the unit is completely inserted into the bracket and the handle is fully down as shown in Fig. 5. This is especially necessary in the case of excessive road vibration, rapid acceleration or vehicle collision because the unit may come out of the bracket if it is not locked into place (Fig. 6). This could result in personal injury to the occupants of the vehicle or physical damage to the unit.

Permanent Installation of QRB Unit

1. Remove the 18-pin plug assembly from the bracket. Using the 2 screws and 2 spacers provided, connect the plug assembly directly to the unit (Fig. 7). Install the optional accessory kit (Alpine 4100) as shown in Fig. 7. Use the mounting sleeve from the 4100 Kit instead of the QRB bracket.
2. Tear off cover label from the bottom chassis and connect the points "A" and "B" by soldering. (See Fig. 8)

NOTE : Be sure to connect the ground lead (black) to the unit chassis using the screw supplied.

① Hex Nut (M5)
② Hex Bolt (M5 × 10)
③ Hex Nuts (M5)
④ Hex Bolt (M5 × 14)
⑤ Self-Tapping Screws (M5 ×20)
⑥ Metal Mounting Strap
⑦ Bracket
⑧ Tabs
⑨ Dashboard
⑩ Handle
⑪ Handle Lever (▲)
⑫ Ground Lead
⑬ Chassis
⑭ Locking Pins
⑮ Spacers (2 spacers provided)
⑯ Screws
⑰ Bracket Support for Mounting Sleeve
⑱ Mounting Sleeve
⑲ Front Trimplate

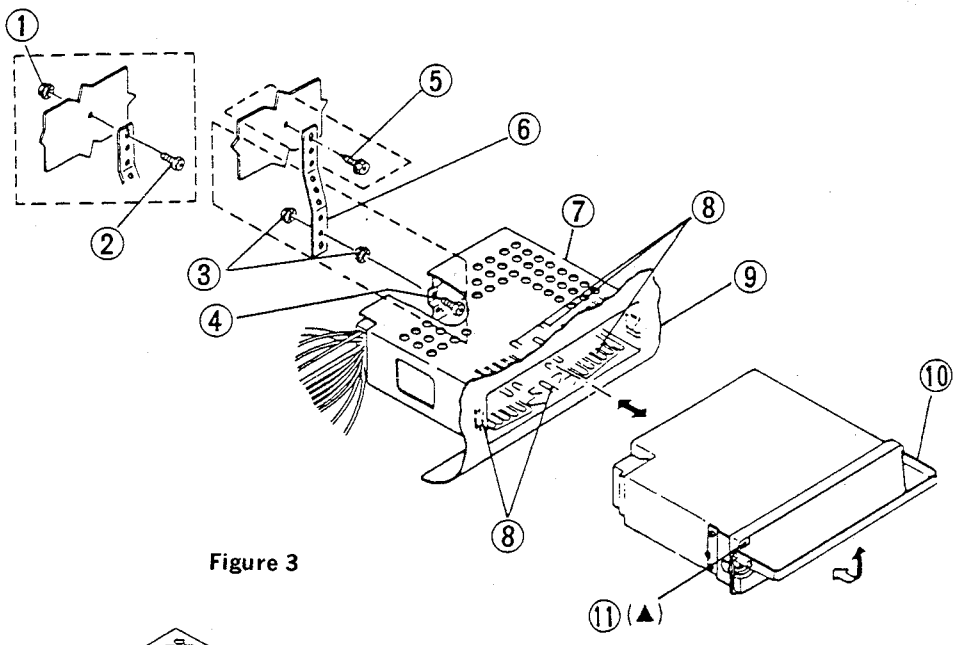


Figure 3

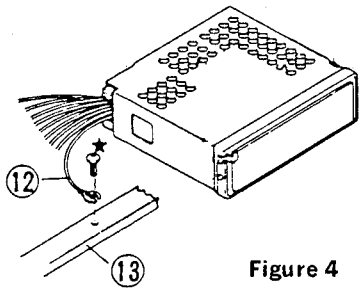


Figure 4

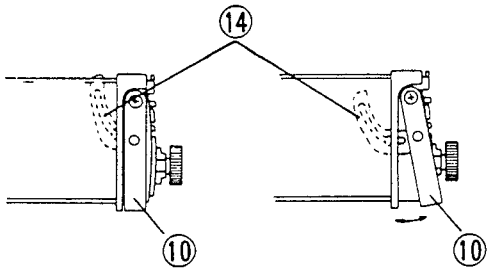
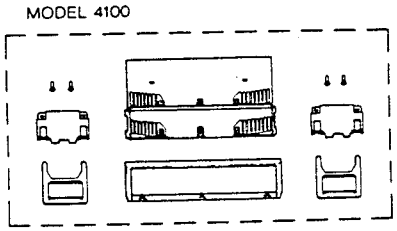
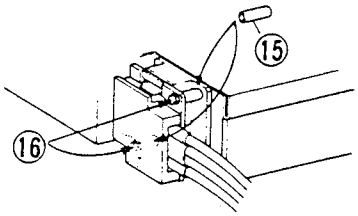


Figure 5

Figure 6





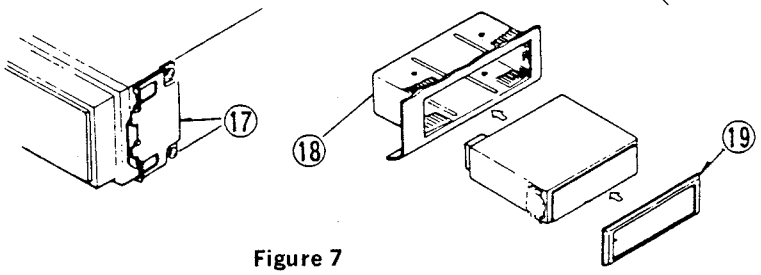


Figure 7

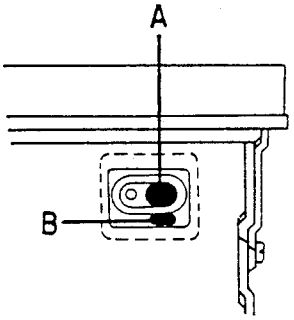


Figure 8

PRECAUTIONS

- When replacing the fuse(s), the replacement fuse must be of the same amperage as shown on the fuse holders. If the fuse(s) blow more than once, carefully check all electrical connections for shorted circuitry. Also have your car's voltage regulator checked. Do not attempt to repair the unit yourself. Return it to your authorized Alpine dealer or the nearest Alpine Service Station for servicing.
- In order to ensure proper performance, be sure the temperature in your car is between 14°F (−10°C) and 140°F (60°C) before turning your player on. Good air circulation is essential, especially in hot weather, to prevent internal heat build-up in the unit.
- C-120 type cassette tapes are not recommended for use in automobile tape players.
- Prevent any foreign objects from entering the cassette opening as the precision mechanism and tape head may be damaged.
- To protect your cassette tapes, store them in a cool place away from dust, dirt, and strong magnetic sources such as electric motors, speakers, and TV sets.
- Check and make sure any slack in the tape is taken up before inserting the tape into the unit. A loose tape could cause damage to the unit and the tape itself. Tighten the cassette by inserting a pencil or a similar instrument into the spindle hole and turn until all the slack has been taken up.

- **CLEANING:** When playback sound begins to deteriorate, it is time to clean the playback head. Insert a special head cleaning cassette into the tape-loading slot and allow it to run for a few minutes to remove any foreign matter. Please contact your authorized Alpine dealer for information about head cleaning devices.

- **CAUTION:** In the event of road vibration, rapid acceleration, or vehicle collision, this unit may become dislodged from its case unless the handle is fully down. This could result in personal injury to occupants of the vehicle or physical damage to the unit. Please see the illustrations below for further information on how to properly secure the handle.

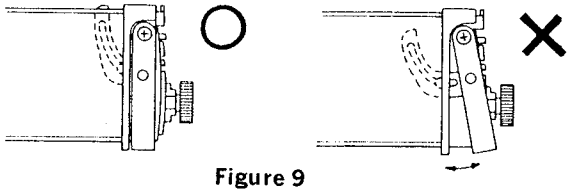


Figure 9

OPERATION

[BASIC OPERATION]

1. **Power On/OFF** ㉜
   Turn the Power on by rotating the Power ON/Off switch clockwise. Turning the switch counter-clockwise until a click is heard will turn the power off.
2. **VOLume Control** ㉜
   After the power has been turned on, rotating the control clockwise will increase volume; counter-clockwise will decrease volume.
3. **BALance Control** ㉜
   To balance the sound between the left and right speakers, pull on the control and rotate to the left or right.
4. **FADer Control** ㉝
   To fade between the front and rear speakers, rotate this control.
5. **Separate Bass and Treble Controls** ①, ②
   Slide these controls to the right to increase, and to the left to decrease the level of Bass or Treble.

[TAPE PLAYER OPERATION]

1. After the power has been turned on, insert the cassette tape, with the tape opening to the right, into the loading slot ⑩ as far as it will go. "TAPE" in the display and one of the tape direction indicators ⑥ will light and the tape will start playing.
2. If a metal or CrO_2 cassette tape is inserted, the tape mechanism automatically sets itself for 70μsec equalization and the "AUTO METAL" indicator ⑮ will light.
3. If a Dolby® B-encoded tape is used, press the Dolby® B button ⑯ to activate this NR function. If a Dolby® C-encoded tape is used, press the Dolby® C button ⑰. The red indicator in the selected button lights up.
4. Adjust VOLume ㉜, BASS ①, TREble ②, BALance ㉜, and FADer ㉝ controls to suit your listening preference.
5. To change from side A to play side B (or vice versa) before the end of the tape is reached, press the PROGRAM ㉜ button once. Tape reverses automatically at the end of the tape to play the other side.
6. There are three ways to stop tape play: 1) Press the TUNER button ㉚, the tuner will come on and the tape will pause; 2) Press the TAPE button ㉛ to temporarily stop tape play; 3) Press the Eject button ④ to stop tape play and eject the cassette.

Fast Rewind Operation

1. Push the REW button ㉓. Fast rewind operation will start and the corresponding tape direction indicator ⑥ will be blinking.
2. To stop the fast rewind operation and to resume playback, push the PLAY button ㉛.
3. When the fast rewind operation reaches the begining of the tape, the mode will automatically switch to playback.

Fast Forward Operation

1. Push the FF button ㉔. Fast forward operation will start and the corresponding tape direction indicator ⑥ will be blinking.
2. To stop the fast forward operation and to resume playback, push the PLAY button ㉛.
3. When the fast forward operation reaches the end of the tape, the mode will automatically switch to playback.

Key-off Pause

If the ignition is turned off while a cassette is playing, the tape head and pinch roller disengage from the tape, but the cassette remains in the tape deck. When the ignition switch is turned on again, playback will begin from the point where it was left off.

Tape Pause

Push the Pause button ㉛. The tape head and pinch roller will disengage from the tape but the cassette remains in the tape deck. To resume playback, press the Pause button ㉛ for a second time.

Music Sensor

1. Press the MUSIC SENSOR (M.S.) button ⑱ and the indicator in the button will light to denote that the sensor is on.
2. To play the next selection ahead on the tape, press the FF button ㉔. In seconds after it is pressed, the MUSIC SENSOR will automatically locate the beginning of the next selection and will then return to the play mode.
3. To replay the current selection, press the REW button ㉓, and the tape will return to the start of the selection and begin playing.
4. Press again the M.S. button ⑱ or SCAN button ⑲ to deactivate the Music Sensor function.

Loudness Button

To activate Loudness circuit, keep pressing the DX/LOUDness button ③ for 1.7 seconds or longer and the indicator ㉘ will light to denote that the loudness is on. This will boost low and high frequencies to compensate for the ear's reduced sensitivity to these frequencies at low volume levels. To deactivate Loudness circuit, press and hold the DX/LOUD button ③ for over 1.7 seconds.

Blank Skip

This function senses a non recorded portion continuing for more than 15 seconds on the tape and fast forwards the tape to a beginning of next program or to the tape end. Press the B. SKIP button ⑳ to activate the Blank Skip function. Press again the B.SKIP button ⑳ to deactivate the Blank Skip function.

Scan

This function allows playback of the first 10 seconds of each selection on the tape in succession. This function is usefull in searching for a specific program ahead on a tape. Press the SCAN button ⑲ to activate the SCAN function. A second push of the SCAN button ⑲, pressing the M.S. ⑱ or TAPE button ㉛ deactivates the function.

Return Eject

Press the R.EJECT ㉑ button to the on position to automatically eject the cassette after playing the A side and B side of the tape.

When placed to ON during playback mode.	Plays A and B sides of the tape and ejects cassette.
When placed to ON during Fast Forward mode.	Fast Forwards the tape and plays the other side of the tape, then ejects cassette.
When placed to ON during Rewind mode.	After rewinding the tape, plays A and B sides of the tape and then ejects the cassette.

[RADIO OPERATION]

MANUAL and AUTOMATIC SEEK TUNING

To listen to the radio, press the TUNER BAND button ㉚.

1. Turn on the power by rotating the VOLume/Power On/OFF switch ㉜ clockwise.
   Continue to rotate it until the disired volume level is reached.

2. Press the TUNER BAND button ㉚ to activate the radio mode.
3. Press TUNER BAND button ㉚ for reception of FM (FM1 or FM2), MW or LW. The radio band indicator will be on, and the ST [stereo] indicator ㉖ will also be on during FM stereo reception.
4. Adjust VOLume ㉜, BASS ①, TREBle ②, BALance ㉜, and FADer ㉝ to suit your listening preference.
5. To automatically tune, press the TUNE button ⑬ until the SEEK indicator ㉙ is displayed. Press the UP ㉔ or DN ㉓ tuning button and the frequency changes to the next receivable station. Repeat the procedure until your desired station is obtained. When the radio reaches the upper or lower end of the band, it automatically starts scanning from that end. To return to manual tuning, press the TUNE button again, the SEEK indicator disappears.
6. To manually tune, press the Tuning Button (UP) ㉔ for higher frequency broadcasts, and press the Tuning Button (DN) ㉓ for lower frequency broadcasts.

Memory Operation

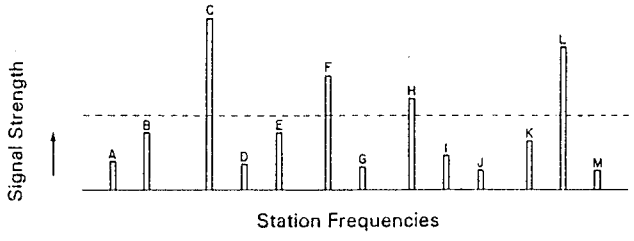
1. Select FM1, FM2, MW, or LW by pressing the TUNER BAND button ㉚.
2. Select a station manually or by SEEK tuning.
3. Press and hold a Station Preset button for more than 2 seconds to preset the station in MEMORY.
4. The frequency or station name code display blinks for 5 seconds indicating that the station can be stored into the preset memory.
5. Press the Station Preset Button for a second time while the frequency/station display is blinking. Now, the station is stored into the preset memory.
6. Press one of the unused Station Preset buttons ㉒ each time.
7. Press the TUNER BAND button ㉚ to preset six stations on another band. Follow Steps 2, 3, 4, 5, and 6. Remember, there are altogether four (FM1, FM2, MW, and LW) bands.
8. To select a frequency programmed into memory, press the desired station preset button, 1 through 6. If the radio is set to MW, you'll receive an MW frequency. If in the FM mode, You'll receive an FM station.
9. When you select one of the six presets, an orange dot will light up in the upper left hand corner of that preset button. This is the direct preset indicator.
10. When you wish to change the preset stations you have stored in memory, enter new stations as stated in the steps 1 through 5. The old ones will be automatically erased and new ones will be memorized.

NOTE: If another station is selected manually or by the SEEK tuning while the unit is receiving a preset station, the indicator in the preset button will blink to let you know the original preset number.

Local/Distance Button Operation

You may select local or distance mode during SEEK tuning. When the DX button ③ is set in the out position (local mode), it allows you to tune in strong signal stations (C, F, H and L as shown below) only. When it is pressed in the distance mode (DX indicator ㉕ is on), weak and strong signal stations (from A through M shown below) will be tuned in.

Once a station is tuned in by SEEK tuning in the local mode, the mode will automatically switch to distance mode for optimum reception.



NOTE: DX (Local/Distance) button ③ functions only in SEEK tuning.

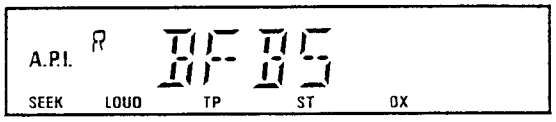
Sensitivity Selection between Tape and FM

This feature allows you to select the sensitivity of FM and Tape. Press and hold the TUNE button ⑬ for more than 2 seconds to change the sensitivity to High or Low. The digital display ⑨ will show "H" for the high mode or "L" for the low mode.

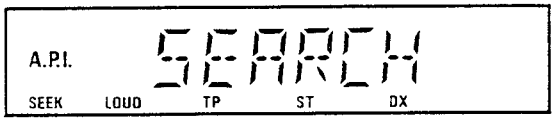
A.P.I (Auto Programme Identification)

1. Select the FM position by pressing the TUNER BAND button ㉚.
2. Press the A.P.I button ⑫ and activate the A.P.I mode. The A.P.I. indicator ⑤ comes on in the display.
3. The RDS station name code appears in about 2 seconds on the display for easy identification of the network or station tuned in.

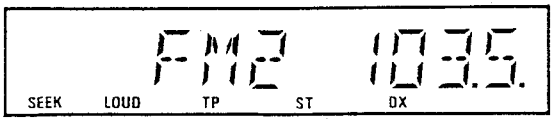
NOTE: If the signal is weak, it requires longer time.



4. The unit automatically retunes to the strongest signal in the same network/station when the tuned-in signal becomes weak.
5. When every signal within the tuned-in RDS network is weak and unreceivable, the unit automatically searches and switches to the strongest station on another RDS network.



6. Press the A.P.I. button ⑫ again to deactivate the A.P.I. function. The display will indicate the frequency of the station in reception.



NOTE: When the A.P.I. button ⑫ is pressed and there is no receivable traffic information signal for 10 seconds, ALARM will sound after the lapse of 25 seconds. Press the A.P.I. button ⑫ again to stop it.

T. INFO (Traffic Information)

To Receive Traffic Information Broadcasting

1. Select the FM position by pressing the TUNER BAND button ㉚.
2. Press the T. INFO button ⑪. The T. INFO indicator ⑦ in the display lights up.
   NOTE: When the traffic information signal is received irrespective of the T. INFO button position, the TP indicator ㉗ will illuminate.
3. Press the TUNE button ⑬ until the SEEK indicator ㉙ appears in the display and place the unit in the SEEK mode.
4. The unit automatically searches for the traffic information stations only and tunes in the TP signal on the RDS or the SK signal on the SDK. During the Traffic Information reception, the display shows as shown below.

5. As the signal of the tuned traffic information station becomes weak, the "R" indicator ⑧ and "TP" indicator ㉗ will disappear, and the unit functions as below.
   - When the unit is set in the ALARM mode, the alarm will sound after 25 seconds to let you know that the traffic information is not receivable. If your cassette or CD player is playing, the traffic information signal automatically places the cassette or CD player in the pause mode and the alarm will sound. Re-tune to other station by manually or by the SEEK tuning.
   - When the unit is set in the SEEK mode, the unit automatically searches and re-tunes to a receivable station. It continues the searching until it finds a receivable station or the SEEK function is deactivated.
   - When the T. INFO ⑪ and A.P.I. buttons ⑫ are pressed to the ON position simultaneously during the ALARM mode, the unit searches for a receivable station within the same programme. If there is no receivable station, the unit returns to the previous frequency you were listening to before this procedure began, and the alarm will sound.
   - When the T. INFO ⑪ and A.P.I. buttons ⑫ are pressed simultaneously to the on position during the SEEK mode, the unit first searches for another receivable station within the same programme, then searches for a station in other programme.

Switching between the Alarm Mode and SEEK mode

a. Press the T. INFO button ⑪ for more than 2 seconds.
b. The display shows "ALARM" or "SEEK".
c. Momental pressing on the T. INFO button ⑪ within 5 seconds switches beteen the Alarm and Seek modes.

6. If the traffic information signal is received during the cassette play or CD play, the unit automatically places the cassette or CD player in

the pause mode and receives the traffic information. When the traffic information is over, the unit returns to the previous mode.

7. Even if the VOLume control ㉜ is set to the minimum position, the volume of the traffic information will be automatically adjusted to preset level. The preset volume level can be adjusted with the control on the left side of the unit. Adjust the control with a screwdriver to your desired level.
8. If traffic information reception is no longer necessary, release the T. INFO button ⑪ for normal radio reception.

SETTING THE CLOCK

RDS Setting

1. Press the TIME button ⑭. The time will appear on the display.
   NOTE: If no button is pressed within 5 seconds after pressing the TIME button, the display changes back to previous display.
2. When the unit receives the clock time code of RDS while the digital display ⑨ is showing "RDS", the unit automatically adjusts to the accurate time.

3. If the unit shows incorrect time caused by a wrong signal, keep pressing the TIME button ⑭ and press the A.P.I. button ⑫ to deactivate the RDS function. Adjust the time manually by referring to the "Manual Setting" below.

Manual Setting

1. Press the TIME button ⑭ and show the time on the display.
   NOTE: If no button is pressed within 5 seconds after pressing the TIME button, the display changes back to previous display.
2. While pressing the TIME button ⑭, adjust "hour" by pressing the "H" button ㉓.
3. Keep pressing the TIME button ⑭ and adjust minute by pressing the "M" button ㉔.

NOTES:

1. If the RDS signal in reception is weak, the time adjustment by RDS function may require a little longer time.
2. The clock operates for approx. 10 years even if the unit is disconnected from the battery.

DISASSEMBLY

1. Removal of Bracket Handle and Top Cover.

(1) Remove four screws marked "▲"as shown in Figure 10.
Pull out the bracket handle in the arrow [1] direction as shown in Figure 10.

(2) Remove four screws marked "■" as shown in Figure 10.
Pull out the top cover in the arrow [2] direction as shown in Figure 10.

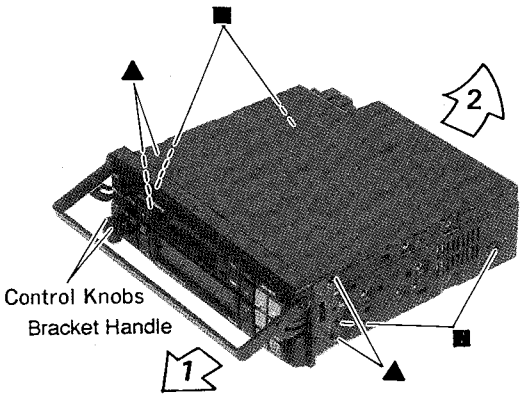


Figure 10

2. Removal of Nose Piece

(1) After removal of Top and Bottom Cover, remove two control knobs and two slide knobs as shown in Figure 12.

(2) Remove two screws marked "○" and two hooks as shown in Figure 11 and 12.

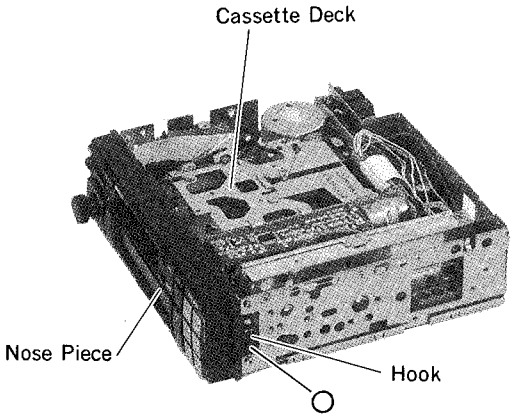


Figure 11

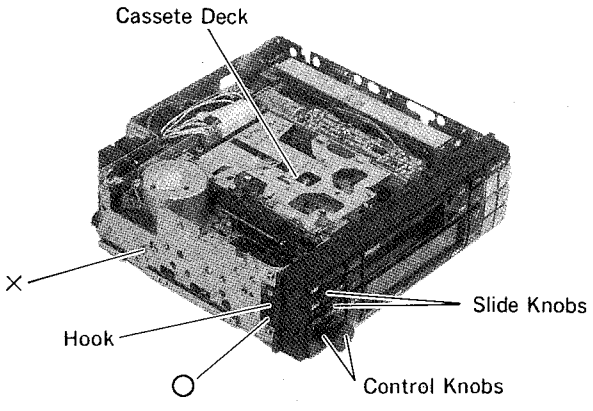


Figure 12

3. Removal of Front P.C.Board

(1) After removal of Nose Piece, remove two screws marked "△" as shown in Figure 13.
(2) Disconnect the parallel wire from the Front P.C.Board.
Note: Do not cut parallel wire from the Main P.C.B by removing the solder (C) as shown in Figure 15.

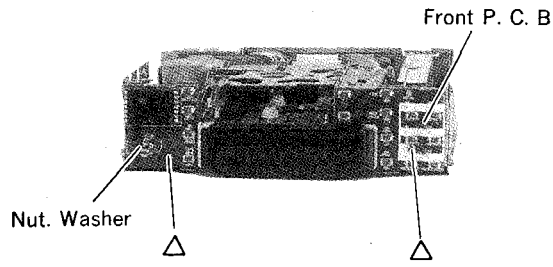


Figure 13

4. Removal of Cassette Deck

(1) After removal of Front P.C.Board, remove five screws marked "x" as shown in Figure 12 and 14.
(2) Disconnect all connectors from the Cassette Deck.
(3) Cassette Deck with Bkt., shield can be removed completely.

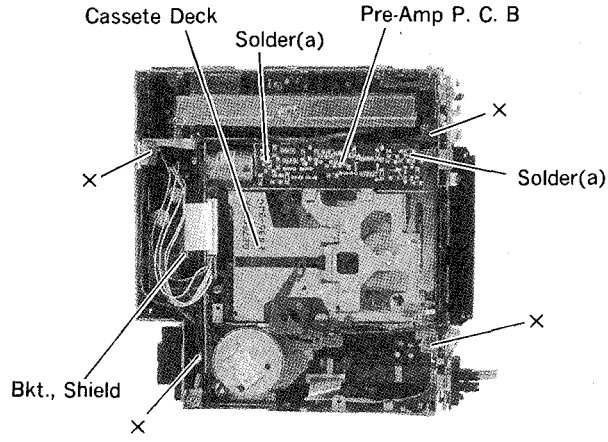


Figure 14

5. Removal of Main P.C.Board

(1) After removal of Cassette Deck, remove the nut and washer as shown in Figure 13.
(2) Remove three screws marked "※" and the solder (b), two hooks as shown in Figure 15.
(3) Disconnect all wires from the Main P.C. Board.

6. Removal of Pre-Amp P.C.Board

(1) After removal of Cassette Deck, remove the solder (a) as shown in Figure 14.
(2) Disconnect all wires from the Pre-Amp P.C. Board.

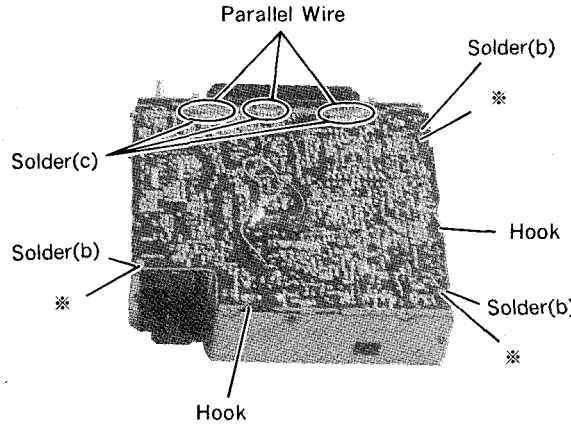


Figure 15

Adjustment Procedures

1. Tape Player

(1) Connection

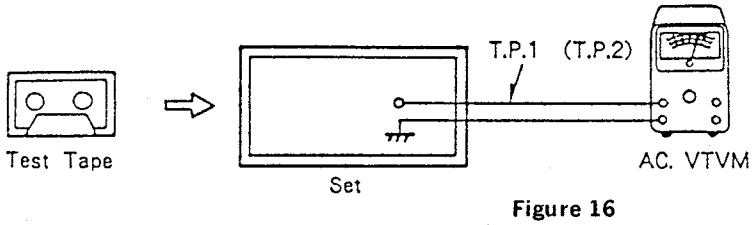


Figure 16

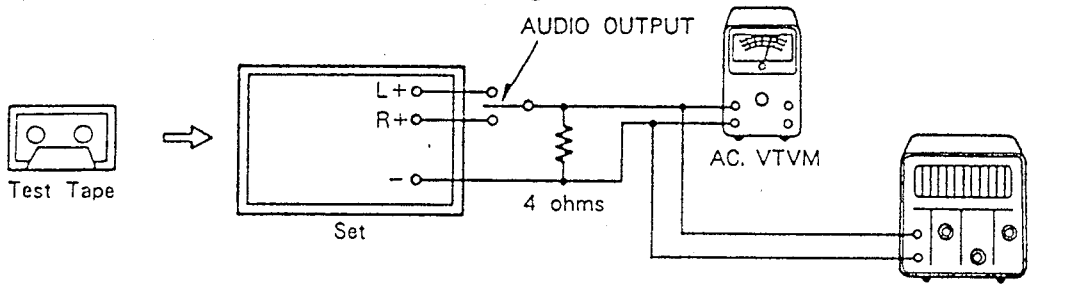


Figure 17

(2) Control Settings

Power Switch .....ON
Fader Control .....Mechanical center
Balance Control .....Mechanical center
Treble/Bass Control .....Mechanical center
Others .....OFF

(3) Adjustment Procedures

Step	Description	Test Tape	Connection	Test Point	Adjustment Point	Adjustment
1	Head Azimuth Adjustment	MTT-114NB (14kHz)	Figure 17	AUDIO OUTPUT (L, R)	Head Azimuth Adjustment Screw (Figure 18)	Adjust for Max. and same level output at Normal and Reverse Positions.
2	Dolby Level Adjustment	MTT-150 (400Hz)	Figure 16	T.P.1 (L) T.P.2 (R)	VR202 (L) VR201 (R)	T.P.1 (L), T.P.2 (R) Output for 245mV±1dB
3	Tape Speed Adjustment	MTT-111 (3kHz)	figure 17	AUDIO OUTPUT (L, R)	Tape Speed Adjustment Volume (Figure 19)	3030-3080Hz

Adjustment Locations

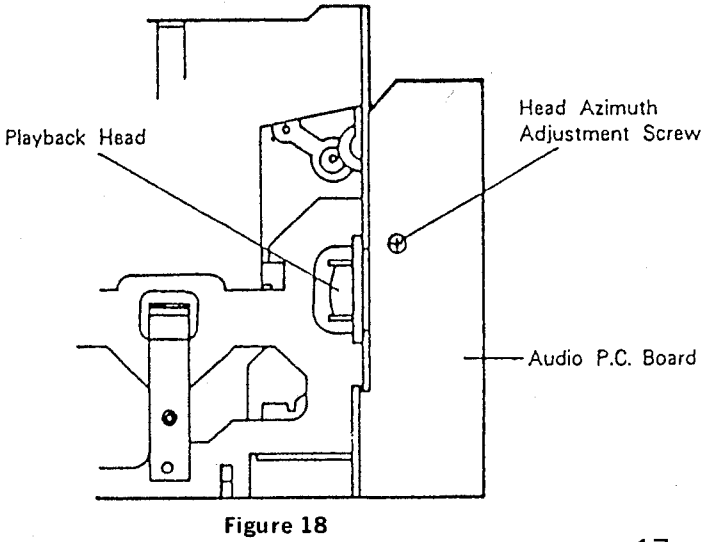


Figure 18

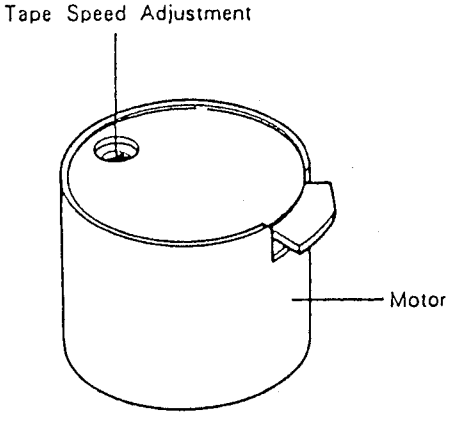


Figure 19

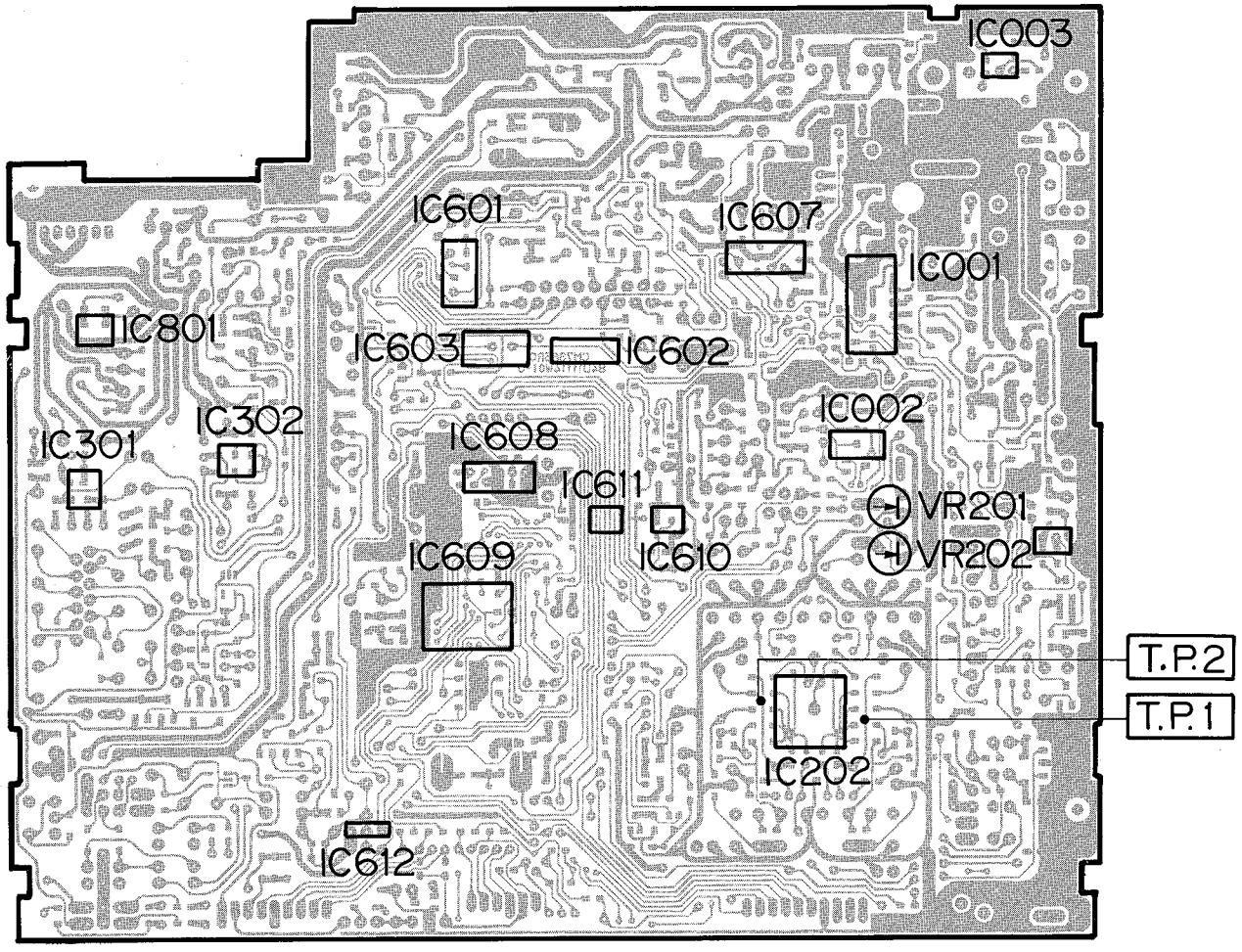
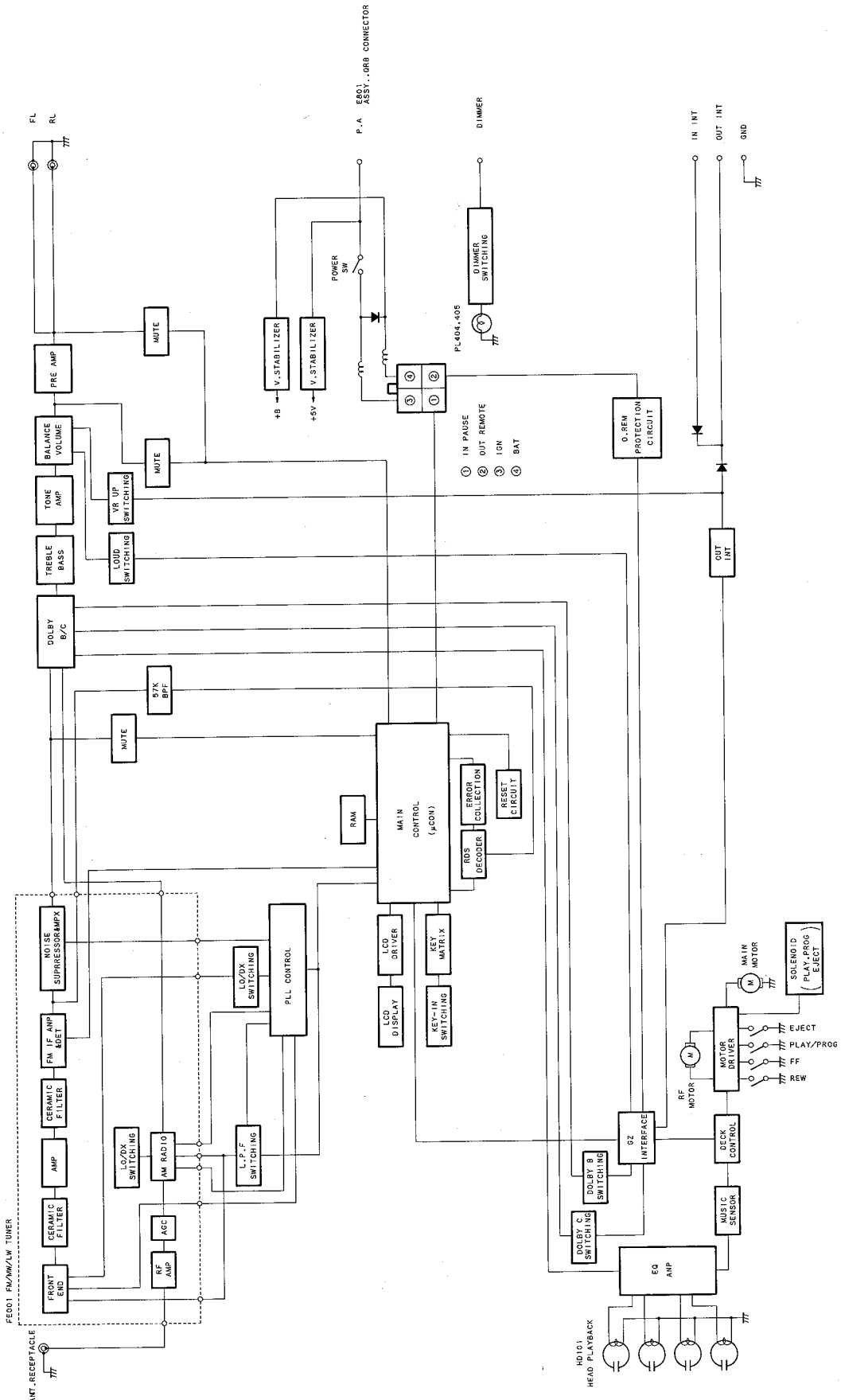
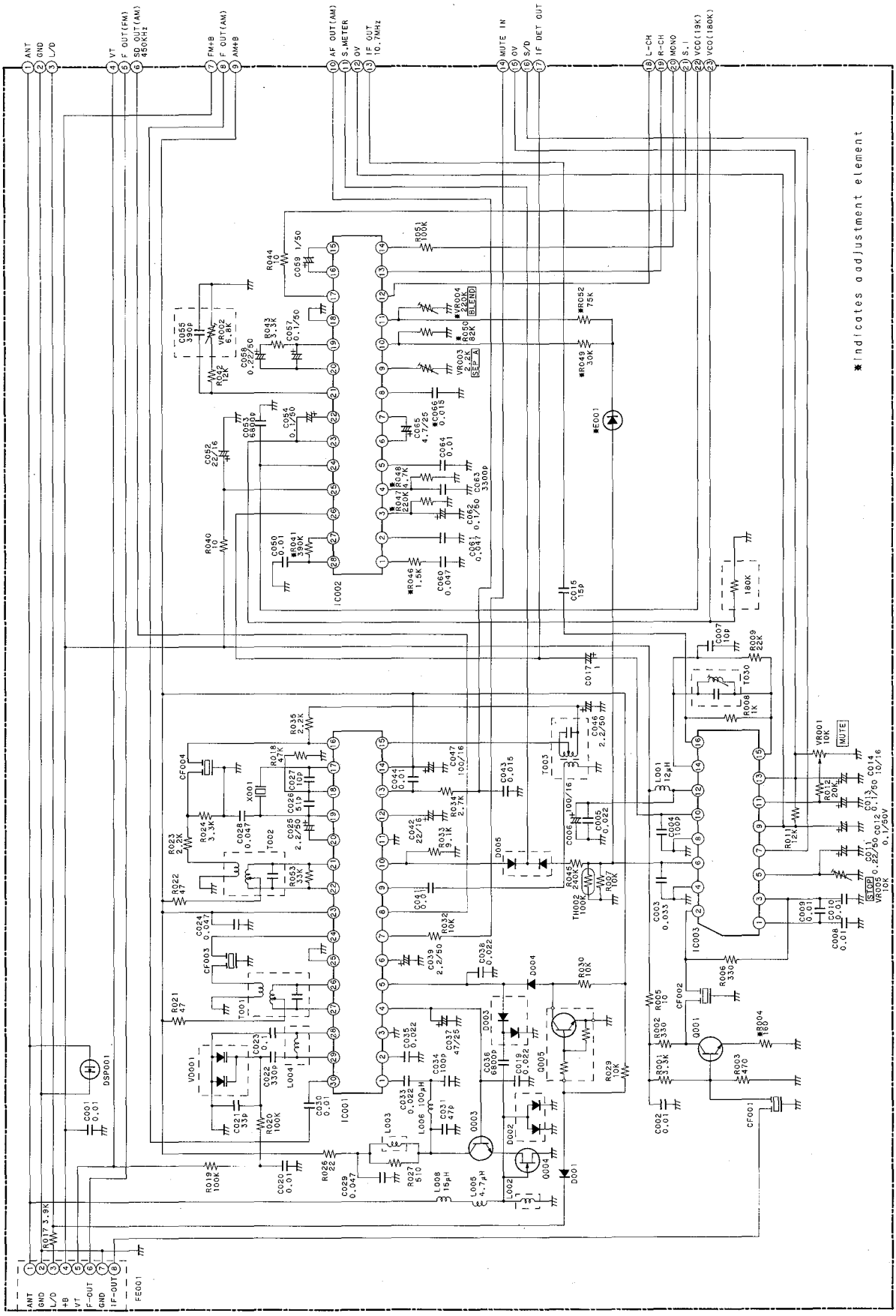


Figure 20 Main P.C.Board (component side)

Block Diagram



Tuner Schematic Diagram



Schematic Diagram (1/3)

NOTE

1. All resistance values are in ohms. K = 1,000 M = 1,000,000
2. All capacitance values are in microfarads. $P = \frac{1}{1{,}000{,}000}$

Voltage Measuring Conditions

1. Power Supply Voltage : DC14.0V
2. Measuring Meter : Digital Multimeter
3. Measuring Point Reference : Between Ground
4. Measuring Conditions : Tape -- Blank
   FM -- 98.1MHz
   MW -- 999kHz
   LW -- 218kHz
   } No Modulation

	IC101	IC601	IC602	IC603	
1	11.5V	6.2V	0V	4.9V	
2	2.9V	5V	4.9V	4.7V	
3	11.2V/0V	6.2V	0V	0V	N/R
4	2.9V	6.2V	5V	4.8V	
5	2.8V	6.2V	0V	4.2V	
6	2.8V	0V	0V	4.6V	
7	2.8V	5V	5V	4.7V	
8	0V	0V	0V	0V	
9	2.8V	0V	0V	4.9V	
10	0V	6.2V	0V	4.2V	
11	2.8V	0V	0V	4.5V	
12	2.8V	6.2V	0V	4.2V	
13	2.8V	0V	0V	4.3V	
14	2.9V	0V	4.9V	4.9V	
15	13.2V	4.9V	0V	4.9V	
16	2.9V	6.3V	5V	5V	

IC608

1	1.2V
2	0V
3	0V
4	4.1V
5	2.4V
6	0V
7	0V
8	0V
9	4.9V
10	0V
11	0V
12	0V
13	0V
14	PS
15	PS
16	PS
17	0V
18	2.5V

	Q001	Q002	Q003	Q004	Q005	Q006	Q007	Q008	Q009	Q010	Q011	Q012	Q013	Q014	Q015	Q101	Q205	Q301	Q303	Q304	Q305	Q306	Q307	Q309	Q310	Q401	Q601	Q602	Q603	Q604	Q606	Q607	Q608	Q610	Q611	Q614	Q615	Q616	Q617	Q618	Q619	Q620	Q630	Q801	Q802	Q803	Q804	Q805	Q806	Q807	Q808	Q809	Q811	Q812	Q813
E	0V	0.6V	0V	0V	0V	0V	4.8V	8.5V	8.5V/7.8V	0V	8.5V	0V	0V	0.6V	9V	0V	0V	0V	0V	0V	0V	0V	12.9V	0V	0V	0V	0V	0V	0V	0V	0V/10V	0V	0V	4.1V	0V	0V	0V	0V	0V	0V	0V	0V	4.9V	5.7V	0V	0V	0V	0V	0V	0V	0V	13V	0V	0V
C	0V	3.8V	3.8V	0V	2.4V	7.3V/0V	13.7V	13.7V	9.2V	8.5V/0V	8.4V/0V	0V/8.5V	8.9V	9.2V	13.7V	11.2V/0V	3V/0V	0V	0V	0V	0V	0V	8.4V	0V	0V	9.5V/0V	9.3V/0V	9.3V/0V	0.1V/0V	12.7V/0V	13.7V	0V	0V	13.7V	3.8V	0V	13V	0V/6.9V	0V/6.9V	0V	4.7V	4.7V	4.7V	0V	3.5V	13.7V	13V	5.7V	0V	13.5V	13.6V	0V	0V	13V	12.9V	0V
B	0V/4.8V	1.1V	0.6V	8.8V	0.6V	0V/3.4V	5.5V	9.2V	1.3V/8.5V	0V/4.7V	7.8V/8.4V	3V/0V	0V	1.1V	9.6V	0V/14V	0V/2.7V	0V/2.7V	0V/2.7V	0V/2.7V	0V/0.7V	0V/0.7V	12.2V	0V/4.2V	0V/4.2V	9.5V/0V	0V/4.2V	0V/4.2V	0V/4.2V	0V/3.8V	0V/11.9V	0V/2.2V	0V/2.2V	4.7V	0V	3.7V	3V/0V	3.5V	3.7V	0V	4.7V	0V	0V	3.5V	5.7V	6.5V	0.3V	10.1V	13.5V	13V	2.7V	13V	0V	12.2V	2.9V
	/LW								FM/AM(MW/LW)	FM/AM(MW/LW)	FM/AM(MW/LW)					N/R	(1/2)H/L	(1/2)H/L	(1/2)LOUD OFF/ON	(2/2)LOUD OFF/ON	VR UP OFF/ON	VR UP OFF/ON	OFF/ON	OFF/ON		OFF/ON	OFF/ON	1/2	2/2			NORMAL/METAL	/TAPE	/TAPE																											

	E	C	B	
Q201	0V	0V/3.5V/0V	4.2V/0V/4.2V	TAPE/FM/AM
Q202	8.3V/3.5V/0V	8.3V/3.5V/0V	0V/4.8V/4.8V	TAPE/FM/AM
Q203	0V	0V/3.5V/0V	4.2V/0V/4.2V	OFF/B/C
Q204	0V/3.6V/8.3V	0V/3.6V/8.3V	4.2V/4.8V/0V	OFF/B/C

	1	2	3	4
Q612	0V/6.3V	0V	0V/13V	13V
Q632	3.1V	0V	13.7V	4.7V

GZ CONTROL P.C.Board

IC501

1	13.9V	22	0V	
2	13.9V	23	6.2V	
3	13.9V	24	5.6V	
4	0V	25	13.6V	
5	0V	26	0V	
6	0V	27	0V/13.9V	FOR/REV
7	0V	28	13.1V	
8	0V	29	P.S	
9	13.9V	30	12.5V	
10	12.3V	31	12.5V	
11	12.3V	32	0V	
12	0.1V	33	0V	
13	0V	34	0.16V	
14	6.2V	35	0V	
15	6.2V	36	0V	
16	6.2V	37	0V	
17	6.2V	38	0V	
18	6.2V	39	0V	
19	6.2V	40	13.9V	
20	6.2V	41	0V	
21	6.2V	42	0V	

IC502

1	1.57V
2	12.4V
3	2V
4	0V
5	0V
6	6.2V
7	6.2V
8	12.4V
9	0.68V

Q501

E	C	B
14V	13.9V	13.2V

	IC001	IC607
1	1.7V	0V
2	0V	0V
3	0V	0V
4	0V	1.3V
5	4.7V	1.9V
6	0V	0V
7	0V	2.6V
8	0V	0V
9	0V/4.8V	1.4V
10	0V/4.7V	0V
11	0V/4.7V	0V
12	0V/3.6V	0V
13	0V	3.6V
14	0V/3.6V	3.6V
15	0V	3.6V
16	1V	PS
17	0V	0V
18	0V/2.2V	PS
19	2.1V	2.3V
20	4.9V	1V
21	1V	2V
22	1V	2V
23	0V	4.9V
24	2.6V	3V

IC202

1	4.2V	25	0V
2	*1	26	0.3V
3	3.4V	27	4.2V
4	4V	28	4V
5	4.1V	29	4.1V
6	0V	30	4.1V
7	8.4V	31	4.1V
8	4V	32	4.1V
9	1.2V	33	4V
10	3.4V	34	4.1V
11	*2	35	0.3V
12	4.2V	36	0V
13	4.2V	37	0.3V
14	4.1V	38	4.2V
15	4.1V	39	0.3V
16	4.1V	40	0.3V
17	4.1V	41	4V
18	0V	42	0V
19	0V	43	0V
20	4.1V	44	4.2V
21	0.3V	45	4.2V
22	0.3V	46	4.1V
23	4.2V	47	4.2V
24	0.3V	48	4.1V

IC202

	OFF	B	C
2	0V	3.6V	8.3V
	TAPE	FM	MW/LW
11	8.3V	3.5V	0V

*1
*2

	IC303	IC606	IC612
1	12.2V	5V	5.2V
2	0V	5V	5.2V
3	1.2V	0V	0V

IC609

1	4.7V	33	0V
2	4V	34	4.7V
3	0V/PS	35	PS
4	0V	36	PS
5	0V	37	PS
6	0V	38	4.9V
7	0V	39	PS
8	PS	40	PS
9	PS	41	PS
10	PS	42	PS
11	5V	43	4.7V
12	4.9V	44	4.7V
13	0V	45	4.7V
14	0V	46	4.7V
15	5V	47	PS
16	5V	48	PS
17	5V	49	PS
18	0V	50	4.9V
19	0V	51	3.8V
20	5V	52	0V
21	2V	53	3V
22	PS	54	0V
23	0.4V	55	5V
24	2.4V	56	5V
25	0V	57	0V
26	0V	58	5V
27	4.7V	59	5V
28	4.7V	60	0V
29	4.9V	61	5V
30	4.8V	62	0V
31	4.7V	63	4.9V
32	0V	64	4.9V

IC401

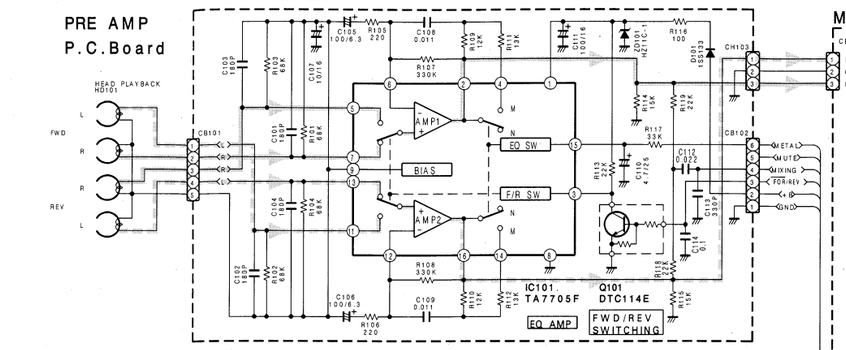
1	PS
2	PS
3	4.9V/0.4V
4	4.9V/0.4V
5	4.9V/0.4V
6	4.9V/0.4V
7	PS
8	0V
9	0V
10	4.9V
11	4.9V
12	4.9V/0.4V
13	4.9V/0.4V
14	PS
15	4.9V
16	4.9V

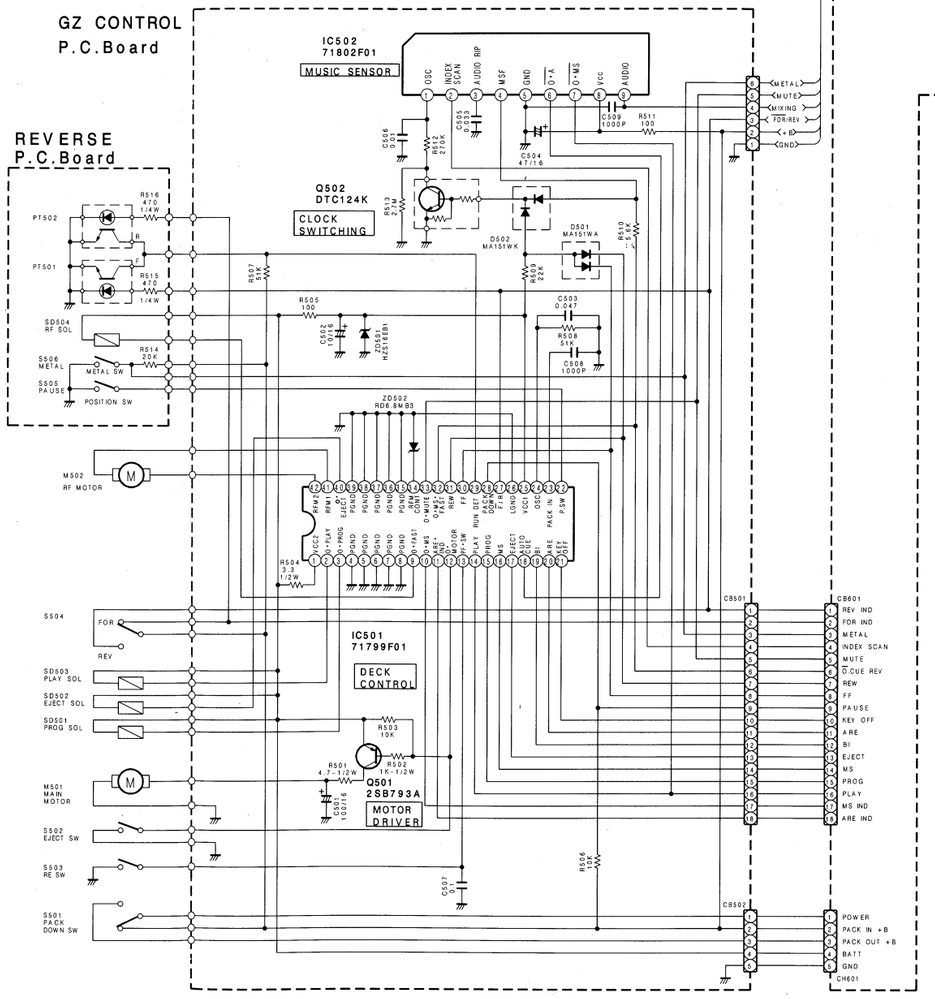
	IC402	IC403
1~55		
56	4.9V	4.9V
57	3.8V	3.8V
58	4.9V	4.9V
59~64		

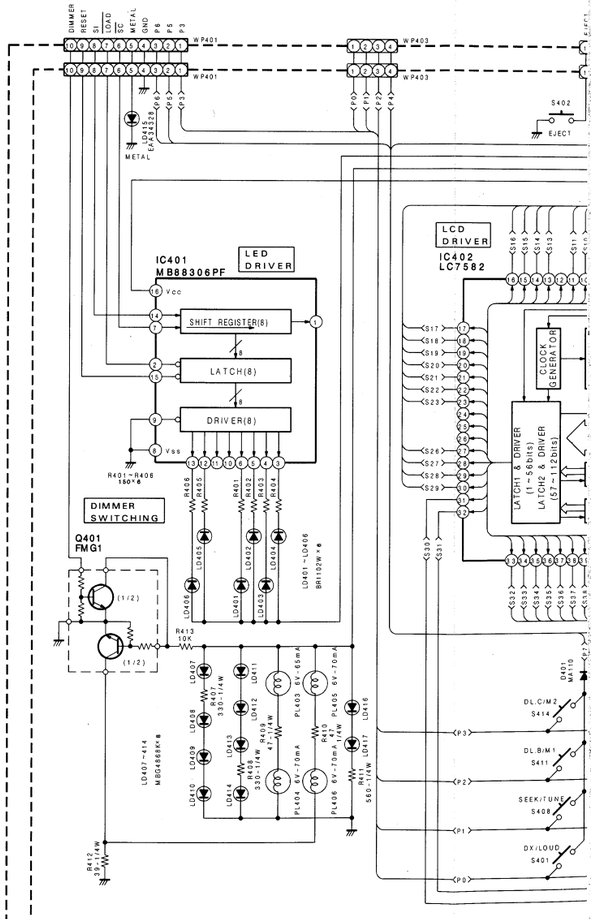
	IC003	IC301	IC302	IC604	IC610	IC611	IC801
1	2.5V	4.3V	4.4V	1.3V	4.3V	0V	4.4V
2	2.5V	3.7V	4.4V	2.5V	0.4V	5V	4.4V
3	2.2V	4.4V	4.1V	2.4V	0V	0V	4.4V
4	0V	0V	0V	0V	0V	0V	0V
5	2.4V	4.4V	4.1V	2.4V	3V	0V	4.4V
6	2.4V	3.7V	4.4V	2.4V	10V	0V	4.4V
7	2.4V	4.4V	4.4V	2.4V	4.2V	0V	4.4V
8	4.9V	8.4V	8.4V	4.9V	4.9V	0V	8.4V

7385R

IC's	IC502 IC501	IC101	IC401	IC402
TRANSISTORS (Q)	Q502 Q501	Q101	Q401	

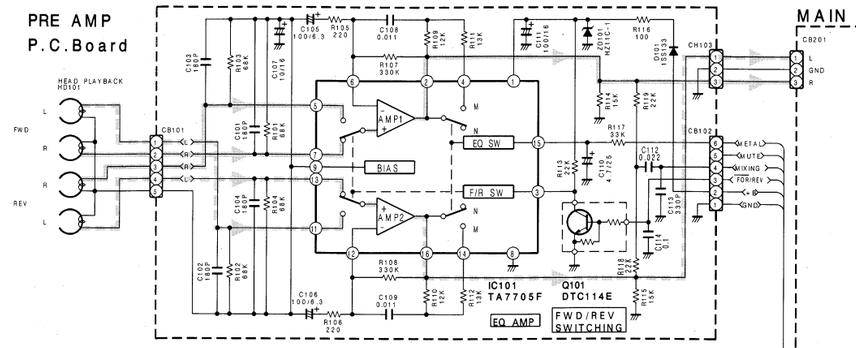






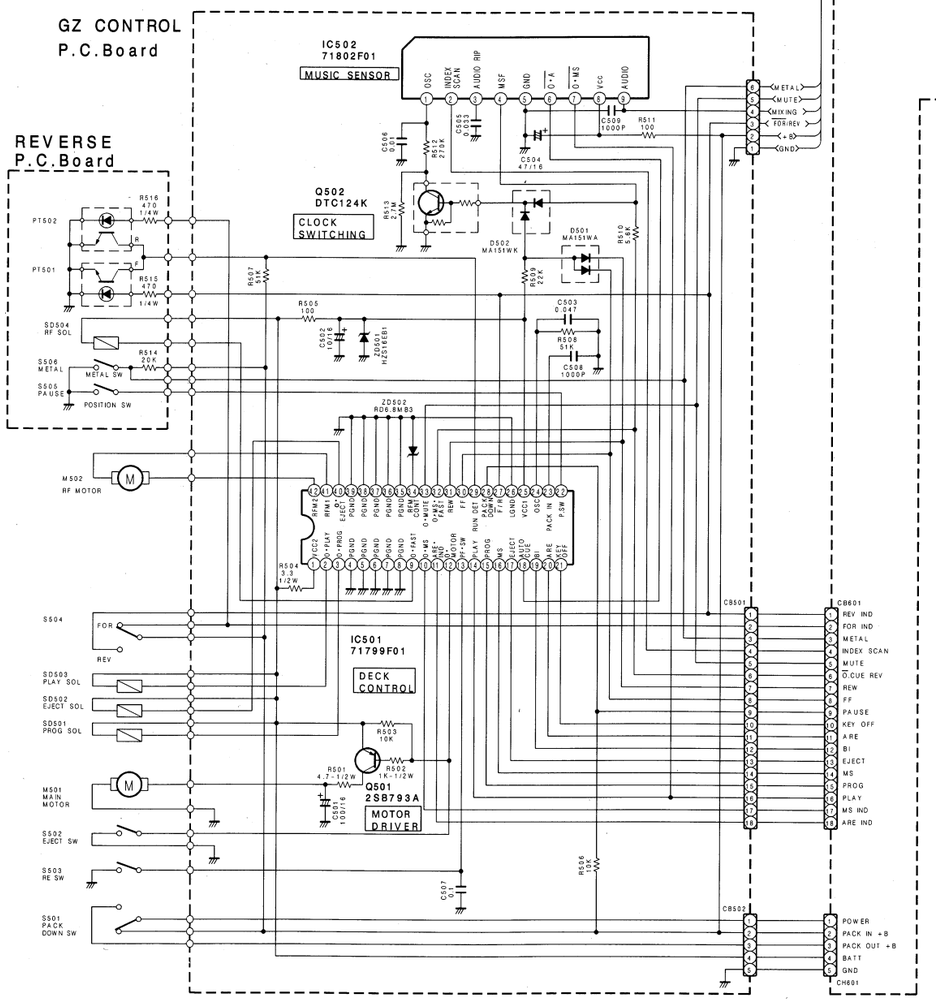
IC'S	IC502 IC501	IC101	IC401	IC402	IC403
TRANSISTORS (Q)	Q502 Q501	Q101	Q401		

PRE AMP
P.C.Board

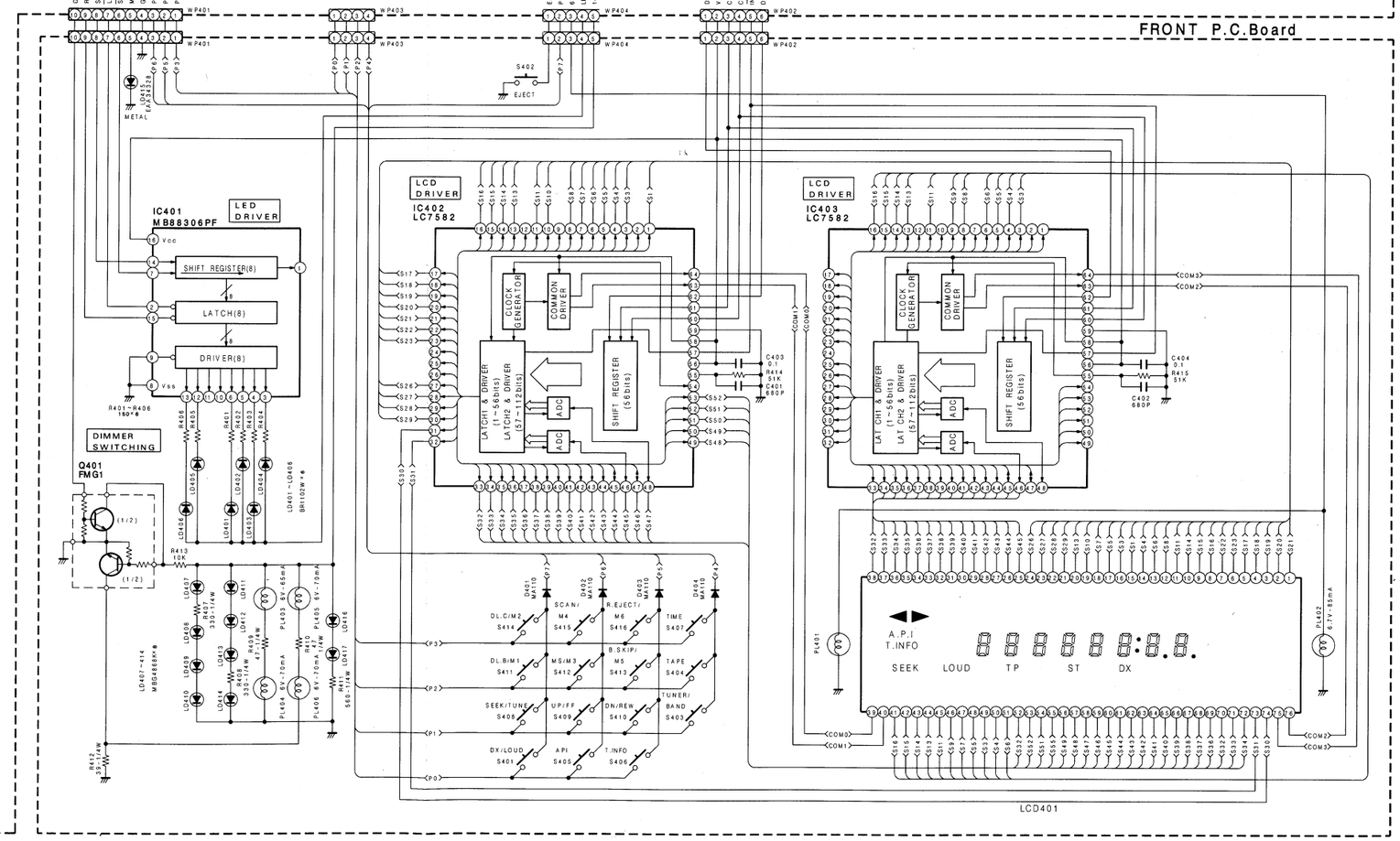


MAIN P.C.Board

GZ CONTROL
P.C.Board



FRONT P.C.Board



Schematic Diagram (2/3)

IC'S	IC601 IC602 IC603	IC609			IC611	IC612 IC606	
TRANSISTORS (Q)	Q601 Q603 Q606 / Q602 Q604	Q616 Q630	Q618 Q820	Q617	Q619	Q804 Q610 Q611	Q632

MAIN P.C.Board

GZ CONTROL P.C.Board

A.R.E IND
M.S IND
PLAY
PROG
M.S
EJECT
B.I
A.R.E
KEY OFF
PAUSE
FF
REW
Q.CUE
MUTE
I.SCAN
METAL
FOR IND
REV IND

C6851 C6852 CN601

POWER
PACK IN
PACK OUT
BATT
GND

R602 10K
R603 10K
R604 10K
D609 1SS332
R605 10K
R606 10K
ZD605 HZ5.6EB1
ZD606 HZ5.6EB1
ZD607 HZ5.6EB1
ZD602 HZ5.6EB1

REW SWITCHING
FF SWITCHING

R607 10K
R608 10K
Q601 DTC124E
Q602 DTC124E

I.SCAN SWITCHING
PAUSE SWITCHING

Q603 DTC124E
Q604 DTC124E

D607 1SS332
R610 10K
D601 MA151WK
S601 CAB SW

METAL SWITCHING

R606 1K
Q606 DTC124TK
R609 680-1/4W

R601 10K
R623 10K
ZD609 HZ5.6EB1
C644 10/16
R695 22K
ZD610 RD5.1MB1
D608 1SS332

IC601 MB88306PF
SHIFT REGISTER(8)
RATCH(8)
DRIVER(8)
GZ INTERFACE

IC602 BU4021BF

IC603 MB88306PF
SHIFT REGISTER(8)
RATCH(8)
DRIVER(8)
LOUD T/A DL.B D.R DL.C P.CON

R626 10K

IC609 15593W06
MAIN CONTROLLER
GND RESET X.IN X.OUT XC.IN XC.OUT Vss NC SK DK SD ST RDS
SI LOAD SC LPF SW CLK P/S DB DIS DATA CLK CL DI CE CS ALARM S.METER INI IN2 IN3 IN.PAUSE IGN DI POWER V.REF A.Vss Vcc A.Vcc SK.CLK MUTE DO CE
POW ON RESET
DATA-1 DATA-2 CLOCK

C627 150P
X603 4.19MHz
R646 1M
C628 150P
X604 32.768KHz
C629 20P
R647 10M
C630 30P
R648 100K
C013 1000P
R688 47K
R689 47K
R690 47K
R691 4.7K
R693 4.7K
R692 4.7K
R680 4.7K
R841 4.7K
R842 10K
R840 4.7K
R681 4.7K
R683 10K
R684 47K
R685 47K
R686 47K
R687 47K
R682 10K
R694 4.7K
S301 PROG

IC612 MN1280-S
OUT COMP COMP V REF1 V REF2 LEVEL CONVERSION CIRCUIT

C643 100/10
C639 0.01
C807 2200P
R842 4.7K

IC606 S-8052ALR
OUT COMP V REF Vss

V.STABILIZER

RAM
IC611 12495W02
SK CS Vout NC DI DO GND NC

Q618 DTC114TU
Q616 DTC124EU
R628 10K
C641 2200P
DK SWITCHING

Q619 DTC114TU
Q617 DTC124EU
R629 10K
C642 1/50
RDS SWITCHING

Q620 DTC114TU
Q630 DTC124EU
R627 10K
C640 1/50
SK SWITCHING

Q804 2SD1266
R813 47-1/4W
R814 47-1/4W
R815 47-1/4W
R816 4.7K-1/4W
ZD611 HZ5.1A1L
6.7V
V.STABILIZER

Q610 2SD973A
R659 1K-1/4W

Q632 FMC3
LED DIMMER SWITCHING
ZD613 HZ3.9EB1
ZD608 HZ5.6 (TBD)
Q611 DTC124E
DISPLAY ERROR CHECK CIRCUIT

R697 1K-1/4W
ZD612 HZ5.6EB1
D610 1SS133

EJECT
METAL
DIMM
B
C
BATT
P.A
IC603
DI
IC609
TO 3/3

7385R

IC609

IC611

IC612
IC606

Q616
Q630

Q618
Q820

Q617

Q619

Q804
Q610
Q611

Q632

Q802

FRONT
P.C.Board

GZ INTERFACE

IC609
15593W06

MAIN
CONTROLLER

IC612
MN1280-S

POWER ON
DETECTOR

IC606
S-8052ALR

RESET
CIRCUIT

IC611
12495W02

RAM

S301
PROG

Q618
DTC114TU

Q616
DTC124EU

Q617
DTC124EU

Q619
DTC114TU

DK
SWITCHING

RDS
SWITCHING

Q620
DTC114TU

Q630
DTC124EU

SK
SWITCHING

V.STABILIZER

Q802
2SD636

Q804
2SD1266

V.STABILIZER

Q610
2SD973A

LED
DIMMER
SWITCHING

Q632
FMC3

Q611
DTC124E

DISPLAY ERROR
CHECK CIRCUIT

Schematic Diagram (1/3)

NOTE

1.All resistance values are in ohms. K=1,000 M=1,000,000

2.All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Voltage Measuring Conditions

1.Power Supply Voltage :DC14.0V
2.Measuring Meter :Digital Multimeter
3.Measuring Point Reference :Between Ground
4.Measuring Conditions : Tape -- Blank
FM -- 98.1MHz
MW -- 999kHz
LW -- 218kHz
} No Modulation

	IC101	IC601	IC602	IC603	
1	11.5V	6.2V	0V	4.9V	
2	2.9V	5V	4.9V	4.7V	
3	11.2V/0V	6.2V	0V	0V	N/R
4	2.9V	6.2V	5V	4.8V	
5	2.8V	6.2V	0V	4.2V	
6	2.8V	0V	0V	4.6V	
7	2.8V	5V	5V	4.7V	
8	0V	0V	0V	0V	
9	2.8V	0V	0V	0V	
10	0V	6.2V	0V	4.2V	
11	2.8V	0V	0V	4.5V	
12	2.8V	6.2V	0V	4.2V	
13	2.8V	0V	0V	4.3V	
14	2.9V	0V	4.9V	4.9V	
15	13.2V	4.9V	0V	4.9V	
16	2.9V	6.3V	5V	5V	

IC608

1	1.2V		
2	0V		
3	0V		
4	4.1V		
5	2.4V		
6	0V		
7	0V		
8	0V		
9	4.9V		
10	0V		
11	0V		
12	0V		
13	0V		
14	PS		
15	PS		
16	PS		
17	0V		
18	2.5V		

	E	C	B	
Q001	0V	0V	0V/4.8V	/LW
Q002	0.6V	3.8V	1.1V	
Q003	0V	3.8V	0.6V	
Q004	0V	0V	8.8V	
Q005	0V	2.4V	0.6V	
Q006	0V	7.3V/0V	0V/3.4V	
Q007	4.8V	13.7V	5.5V	
Q008	8.5V	13.7V	9.2V	
Q009	8.5V	8.5V/7.8V	1.3V/8.5V	FM/AM(MW/LW)
Q010	0V	8.5V/0V	0V/4.7V	FM/AM(MW/LW)
Q011	8.5V	8.4V/0V	7.8V/8.4V	FM/AM(MW/LW)
Q012	0V	0V/8.5V	3V/0V	
Q013	0V	8.9V	0V	
Q014	0.6V	9.2V	1.1V	
Q015	9V	13.7V	9.6V	
Q101	0V	11.2V/0V	0V/14V	N/R
Q205	0V	3V/0V	0V/2.7V	(1/2)H/L
	0V	3V/0V	0V/2.7V	(1/2)H/L
Q301	0V	0V	0V/2.7V	(1/2)LOUD OFF/ON
Q301	0V	0V	2.3V/0V	(2/2)LOUD OFF/ON
Q303	0V	0V	7.5V/0V	VR UP OFF/ON
Q304	0V	0V	7.5V/0V	VR UP OFF/ON
Q305	0V	0V	0V/0.7V	OFF/ON
Q306	0V	0V	0V/0.7V	OFF/ON
Q307	12.9V	8.4V	12.2V	
Q309	0V	0V	0V/4.2V	OFF/ON
Q310	0V	0V	0V/4.2V	OFF/ON
Q401	0V	9.5V/0V	0V/7.2V	1/2
	0V	0.3V/2.3V	9.5V/0V	2/2
Q601	0V	9.3V/0V	0V/4.2V	
Q602	0V	9.3V/0V	0V/4.2V	
Q603	0V	0.1V/0V	0V/4.2V	
Q604	0V	12.7V/0V	0V/3.8V	
Q606	0V/10V	13.7V	0V/11.9V	NORMAL/METAL
Q607	0V	0V	0V/2.2V	/TAPE
Q608	0V	0V	0V/2.2V	/TAPE
Q610	4.1V	13.7V	4.7V	
Q611	0V	3.8V	0V	
Q614	13V	0V	13V	
Q615	0V	0V/6.9V	3V/0V	
Q616	0V	0V/6.9V	3.5V	
Q617	0V	0V	3.7V	
Q618	0V	4.7V	0V	
Q619	0V	4.7V	0V	
Q620	0V	4.7V	0V	
Q630	0V	0V	3.5V	
Q801	4.9V	13.7V	5.7V	
Q802	5.7V	13V	6.5V	
Q803	0V	5.7V	0.3V	
Q804	9.5V	13.7V	10.1V	
Q805	13.7V	0V	13.5V	
Q806	0V	13.5V	0V	
Q807	13.6V	13.6V	13V	
Q808	0V	0V	2.7V	
Q809	13.7V	0V	13V	
Q811	0V	13V	0V	
Q812	13V	12.9V	12.2V	
Q813	0V	0V	2.9V	

IC001

1	1.7V		
2	0V		
3	0V		
4	0V		
5	4.7V		
6	0V		
7	0V		
8	0V		
9	0V/4.8V		
10	0V/4.7V		
11	0V/4.7V		
12	0V/3.6V		
13	0V		
14	0V/3.6V		
15	0V		
16	1V		
17	0V		
18	0V/2.2V		
19	2.1V		
20	4.9V		
21	1V		
22	1V		
23	0V		
24	2.6V		

IC607

0V
0V
0V
1.3V
1.9V
0V
2.6V
0V
1.4V
0V
0V
3.6V
3.6V
3.6V
PS
0V
PS
2.3V
1V
2V
2V
4.9V
3V

IC202

1	4.2V	25	0V
2	*1	26	0.3V
3	3.4V	27	4.2V
4	4V	28	4V
5	4.1V	29	4.1V
6	0V	30	4.1V
7	8.4V	31	4.1V
8	4V	32	4.1V
9	1.2V	33	4V
10	3.4V	34	4.1V
11	*2	35	0.3V
12	4.2V	36	0V
13	4.2V	37	0.3V
14	4.1V	38	4.2V
15	4.1V	39	0.3V
16	4.1V	40	0.3V
17	4.1V	41	4V
18	0V	42	0V
19	0V	43	0V
20	4.1V	44	4.2V
21	0.3V	45	4.2V
22	0.3V	46	4.1V
23	4.2V	47	4.2V
24	0.3V	48	4.1V

IC202

	OFF	B	C
2	0V	3.6V	8.3V
	TAPE	FM	MW/LW
11	8.3V	3.5V	0V

*1
*2

IC609

1	4.7V	33	0V
2	4V	34	4.7V
3	0V/PS	35	PS
4	0V	36	PS
5	0V	37	PS
6	0V	38	4.9V
7	0V	39	PS
8	PS	40	PS
9	PS	41	PS
10	PS	42	PS
11	5V	43	4.7V
12	4.9V	44	4.7V
13	0V	45	4.7V
14	0V	46	4.7V
15	5V	47	PS
16	5V	48	PS
17	5V	49	PS
18	0V	50	4.9V
19	0V	51	3.8V
20	5V	52	0V
21	2V	53	3V
22	PS	54	0V
23	0.4V	55	5V
24	2.4V	56	5V
25	0V	57	0V
26	0V	58	5V
27	4.7V	59	5V
28	4.7V	60	0V
29	4.9V	61	5V
30	4.8V	62	0V
31	4.7V	63	4.9V
32	0V	64	4.9V

	IC303	IC606	IC612
1	12.2V	5V	5.2V
2	0V	5V	5.2V
3	1.2V	0V	0V

IC401

1	PS
2	PS
3	4.9V/0.4V
4	4.9V/0.4V
5	4.9V/0.4V
6	4.9V/0.4V
7	PS
8	0V
9	0V
10	4.9V
11	4.9V
12	4.9V/0.4V
13	4.9V/0.4V
14	PS
15	4.9V
16	4.9V

	IC402	IC403
1~55	4.9V	4.9V
56	3.8V	3.8V
57	4.9V	4.9V
58		
59~64		

	IC003	IC301	IC302	IC604	IC610	IC611	IC801
1	2.5V	4.3V	4.4V	1.3V	4.3V	0V	4.4V
2	2.5V	3.7V	4.4V	2.5V	0.4V	5V	4.4V
3	2.2V	4.4V	4.1V	2.4V	0V	0V	4.4V
4	0V	0V	0V	0V	0V	0V	0V
5	2.4V	4.4V	4.1V	2.4V	3V	0V	4.4V
6	2.4V	3.7V	4.4V	2.4V	1.0V	0V	4.4V
7	2.4V	4.4V	4.4V	2.4V	4.2V	0V	4.4V
8	4.9V	8.4V	8.4V	4.9V	4.9V	0V	8.4V

	E	C	B	
Q201	0V	0V/3.5V/0V	4.2V/0V/4.2V	TAPE/FM/AM
Q202	8.3V/3.5V/0V	8.3V/3.5V/0V	0V/4.8V/4.8V	TAPE/FM/AM
Q203	0V	0V/3.5V/0V	4.2V/0V/4.2V	OFF/B/C
Q204	0V/3.6V/8.3V	0V/3.6V/8.3V	4.2V/4.8V/0V	OFF/B/C

	1	2	3	4
Q612	0V/6.3V	0V	0V/13V	13V
Q632	3.1V	0V	13.7V	4.7V

GZ CONTROL P.C.Board

IC501

1	13.9V	22	0V
2	13.9V	23	6.2V
3	13.9V	24	5.6V
4	0V	25	13.6V
5	0V	26	0V
6	0V	27	0V/13.9V
7	0V	28	13.1V
8	0V	29	PS
9	13.9V	30	12.5V
10	12.3V	31	12.5V
11	12.3V	32	0V
12	0.1V	33	0V
13	0V	34	0.16V
14	6.2V	35	0V
15	6.2V	36	0V
16	6.2V	37	0V
17	6.2V	38	0V
18	6.2V	39	0V
19	6.2V	40	13.9V
20	6.2V	41	0V
21	6.2V	42	0V

FOR/REV

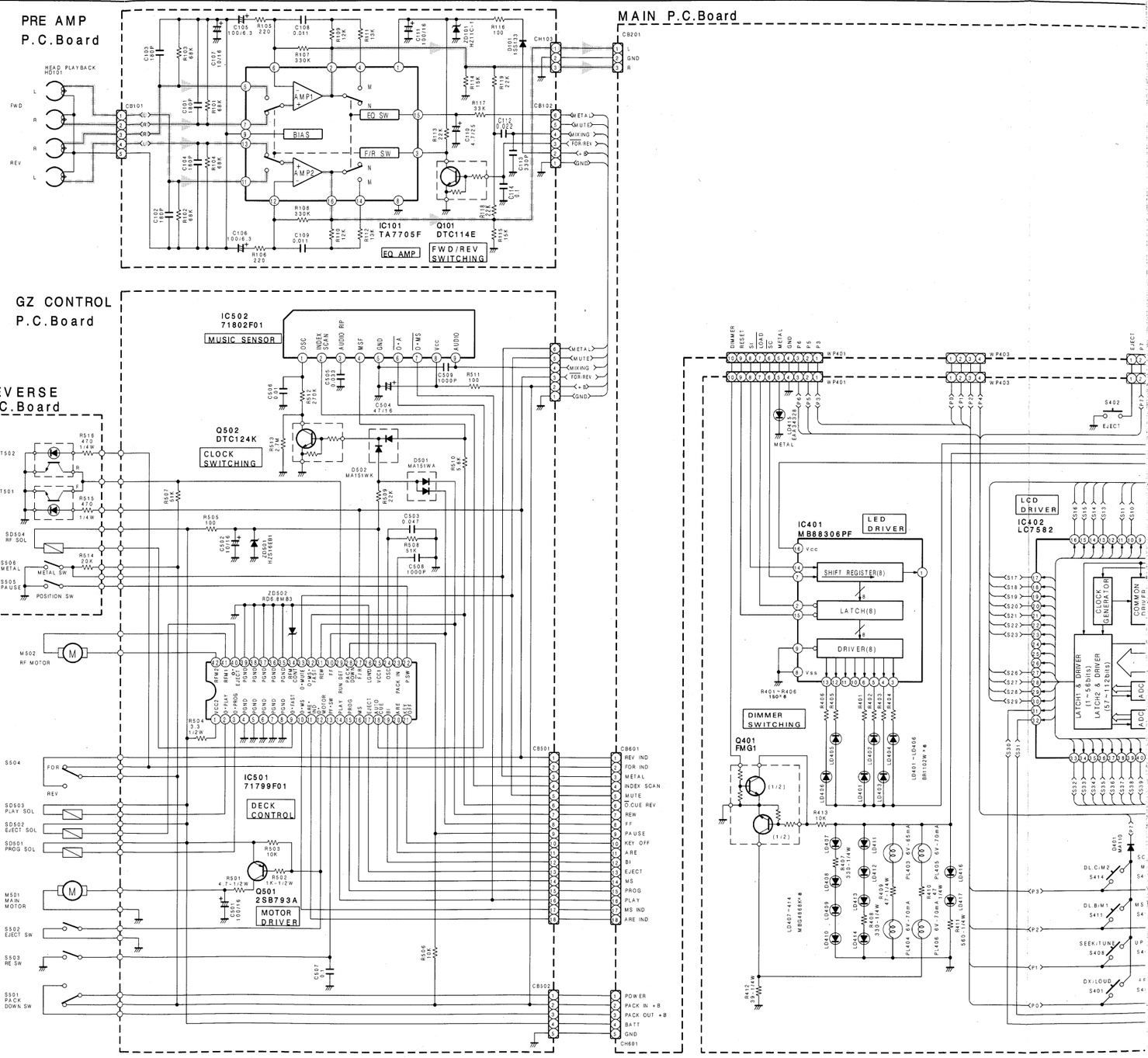
IC502

1	1.57V
2	12.4V
3	2V
4	0V
5	0V
6	6.2V
7	6.2V
8	12.4V
9	0.68V

Q501

E	C	B
14V	13.9V	13.2V

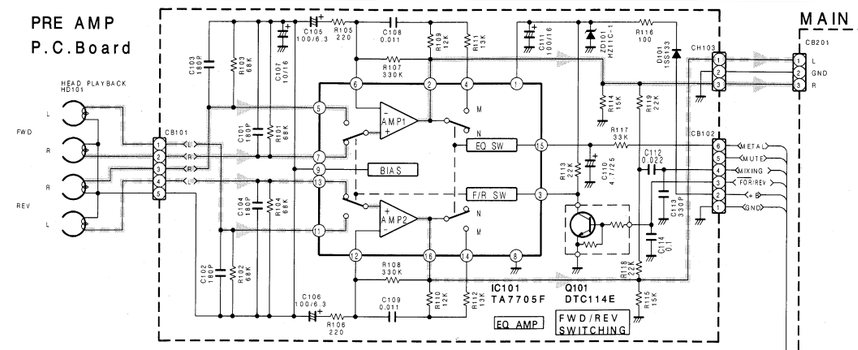
IC'S	IC502 IC501	IC101	IC401	IC402
TRANSISTORS (Q)	Q502 Q501	Q101	Q401	



7385R

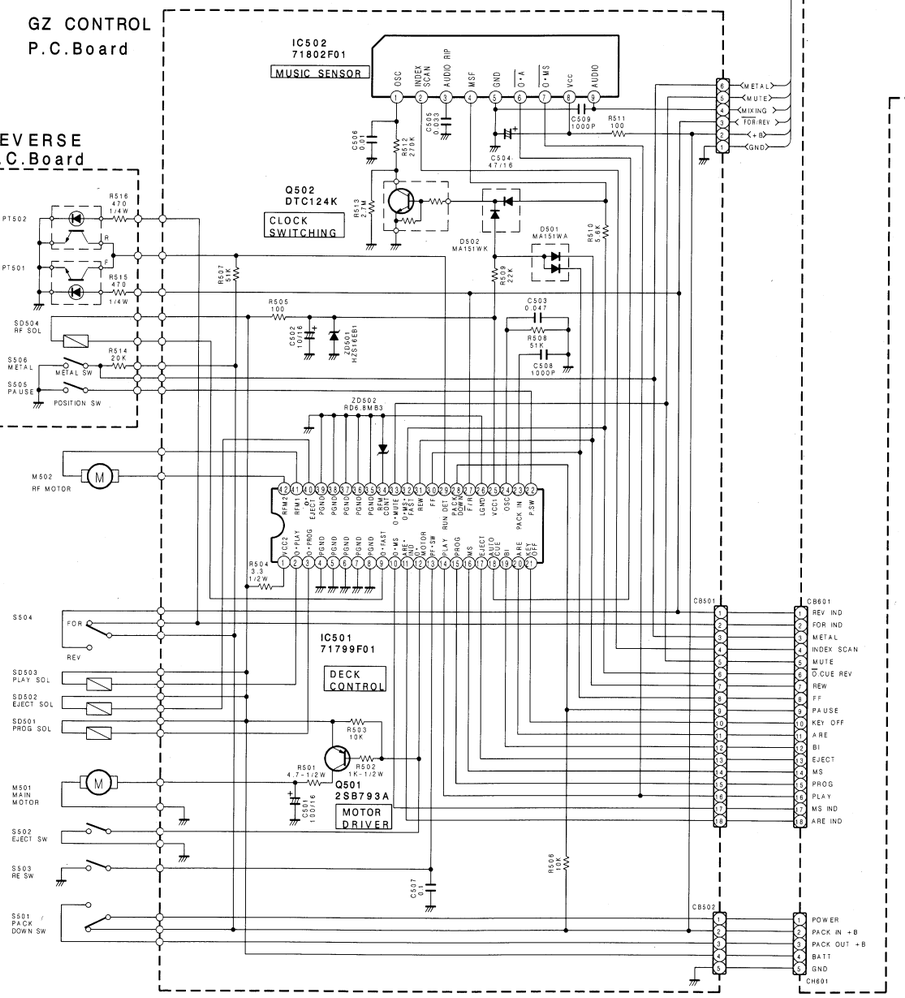
IC'S	IC502 IC501	IC101	IC401	IC402	IC403
TRANSISTORS (Q)	Q502 Q501	Q101	Q401		

PRE AMP P.C.Board

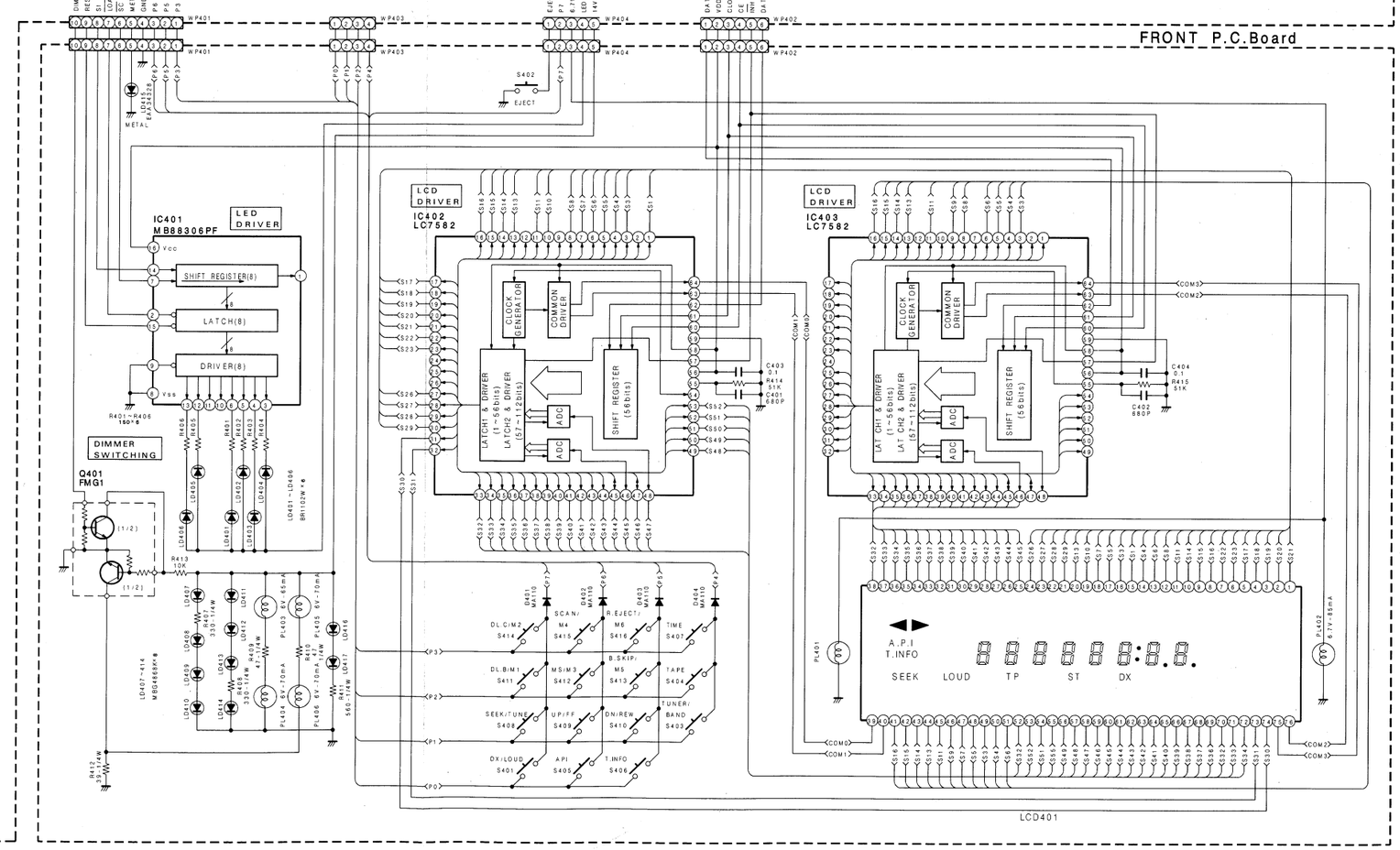


MAIN P.C.Board

GZ CONTROL P.C.Board



FRONT P.C.Board



Schematic Diagram (2/3)

IC'S	IC601 IC602 IC603	IC609				IC611	IC612 IC605
TRANSISTORS (Q)	Q601 Q603 Q606 / Q602 Q604	Q616 Q630	Q618 Q820	Q617	Q619		Q804 Q610 Q611 / Q632

MAIN P.C.Board

GZ CONTROL P.C.Board

IC601 MB88306PF — SHIFT REGISTER(8) / RATCH(8) / DRIVER(8) — GZ INTERFACE

IC602 BU4021BF — GZ INTERFACE

IC603 MB88306PF — SHIFT REGISTER(8) / RATCH(8) / DRIVER(8)

IC609 15593W06 — MAIN CONTROLLER

IC612 MN1280-S — CUT / COMP / V.REF1 / V.REF2 / LEVEL EXTENSION CIRCUIT

IC606 S-8052ALR — CUT / COMP / V.REF

IC611 12495W02 — RAM

REW SWITCHING — Q601 DTC124E

FF SWITCHING — Q602 DTC124E

I.SCAN SWITCHING — Q603 DTC124E

PAUSE SWITCHING — Q604 DTC124E

METAL SWITCHING — Q606 DTC124TK

DK SWITCHING — Q616 DTC124EU

RDS SWITCHING — Q617 DTC124EU

Q618 DTC114TU

Q619 DTC114TU

SK SWITCHING — Q630 DTC124EU

Q620 DTC114TU

V.STABILIZER — Q804 2SD1266

LED DIMMER SWITCHING — Q610 2SD973A

DISPLAY ERROR CHECK CIRCUIT — Q611 DTC124E

Q632 FMC3

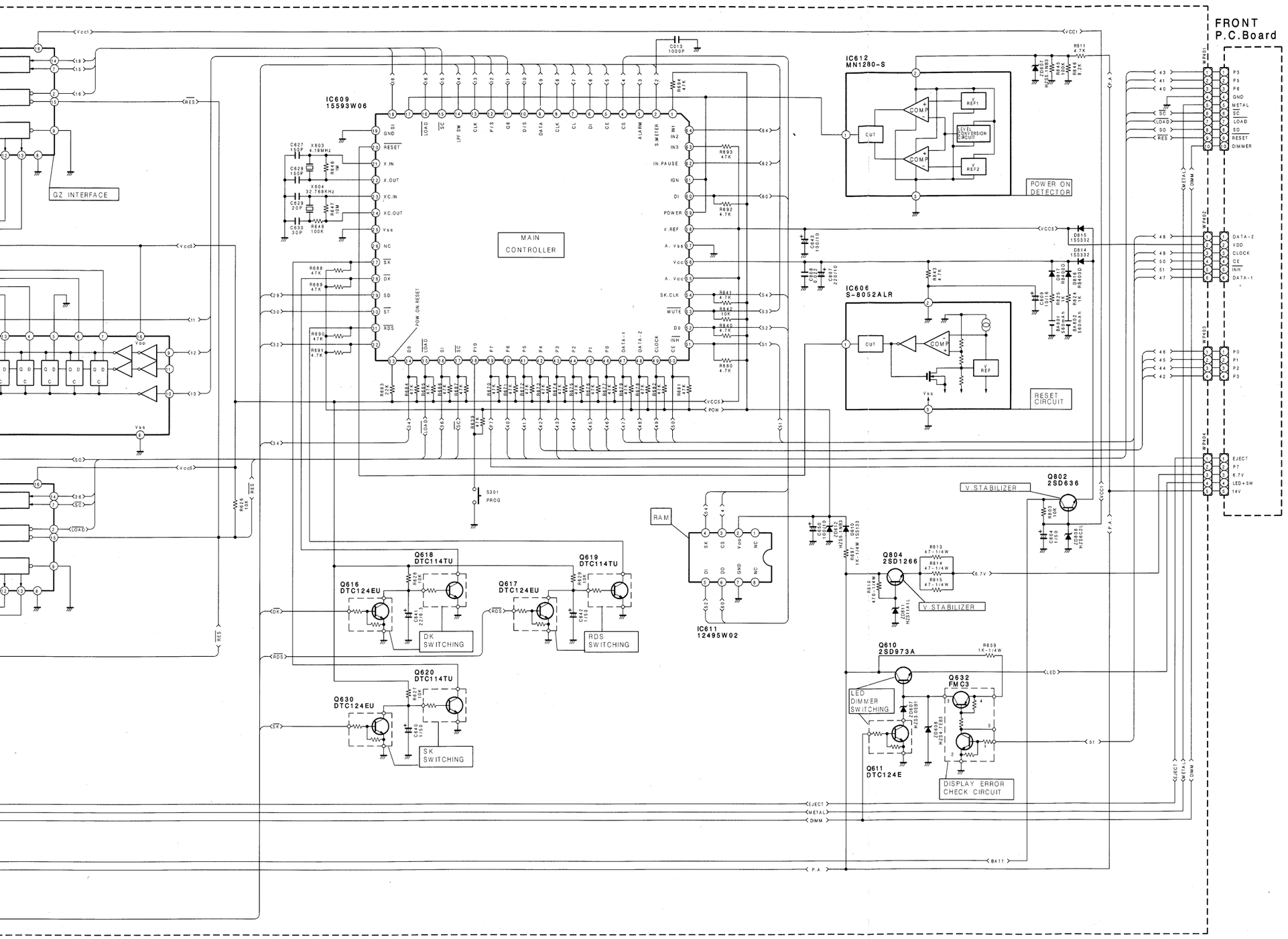
S601 ORB SW

S301 PROG

TO 3/3

7385R

IC609				IC611	IC612 IC606		
Q616 Q630	Q618 Q820	Q617	Q619		Q804 Q613 Q611	Q632	Q802



Schematic Diagram (3/3)

IC'S	IC202	IC001	IC301	IC302 IC801	IC303
TRANSISTORS (Q)	Q202 Q201 Q204 Q203 Q006 Q607 Q608 Q004 Q012 Q205	Q001 Q014 Q005 Q002	Q810 Q013 Q003	Q301 Q303 Q304 Q015 Q008 Q009 Q010 Q011 Q007	Q309 Q310 Q305 Q306 Q631	IC003 IC604 IC610 Q615	IC607 IC608 Q612

MAIN P.C.Board

FRONT P.C.Board

PREAMP P.C.Board

FE001(FM/MW/LW TUNER MB4E710B)

IC202 CXA1098Q

IC001 LC7218M

IC301 NJM4560M

IC302 NJM5532M

IC801 NJM4560M

IC303 M5236ML

IC002 BU4066F

IC003-1/2 NJM4558M

IC003-2/2 NJM4558M

IC604-1/2 NJM4558M

IC604-2/2 NJM4558M

IC607 LA2231M

IC610 NJM4558M

IC608 15851W02

TAPE/RADIO SWITCHING

FM/AM SWITCHING

DOLBY-C SWITCHING

DOLBY-B SWITCHING

DOLBY B/C

NF TONE AMP

VOLUME

BALANCE

LOUD SWITCHING

PRE AMP

MUTING

FADER

QRB CONNECTOR

T.INFO VOLUME CONTROL SWITCHING

VOLUME UP SWITCHING

ALARM ADJUST

V.STABILIZER

L/D SWITCHING

AF SEARCH SWITCHING (SD)

MUTE SWITCHING

PLL CONTROL

FM LEVEL SWITCHING

MUTING

AF SEARCH SWITCHING

L.P.F SWITCHING

MW/LW SWITCHING

MW/LW L.P.F

FM L.P.F

AM+B

FM+B

FM/AM SWITCHING

57KHz B.P.F

AUDIO CLOSE DETECTOR

1/2 Vcc

ASO PROTECT

OVER CURRENT PROTECT

ALARM

IC302 IC801
IC003 IC604 IC610
Q305 Q306
Q631
IC303
IC607 IC608
Q615 Q612 Q614
Q307 Q812 Q813
Q809
Q803 Q801
Q805
Q806
Q807
Q808

IC302
NJM5532M

FADER

Q305
2SD1330

MUTING

Q306
2SD1330

IC303
M5236ML

ASO PROTECT
OVER CURRENT PROTECT
ERROR AMP
START
REF. VOLTAGE

AUDIO V.STADILIZER

Q307
2SB644

Q812
2SB793A

+B SWITCHING

Q813
DTC124E

E801-2/2
QRB
CONNECTOR

FR
FL
RR
RL

IC801
NJM4560M

1/2 Vcc

Q612
FMC3

MUTE SWITCHING

Q614
DTA124E

OFF MUTE

Q615
DTC124E

Q809
DTA124EL

OUT INT

Q811
DTC124E

IN PAUSE
OUT REMOTE
IGNITION
BATTERY
GND
3A
3A
AUDIO INTERRUPT IN
AUDIO INTERRUPT OUT
POWER ANT
DIMMER CONTROL

OUT REMOTE PROTECTION CIRCUIT

OUT REMOTE SWITCHING

Q807
2SB911M

Q805
2SA1576

Q808
DTC124E

Q806
DTC124E

S302
POWER SW

IC003-1/2
NJM4558M

IC003-2/2
NJM4558M

57KHz B.P.F

AUDIO CLOSE DETECTOR

Q631
DTC124E

IC604-2/2
NJM4558M

1/2 V cc

IC604-1/2
NJM4558M

ALARM

IC607
LA2231M

Q803
DTC124E

V STABILIZER

RDS DECODER

ERROR COLLECTION

IC608
15851W02

X601
4MHz

TO 2/3

DIMM
B
C
BATT
PA
IC603
01
IC609

7385R

G H I J K L M N O

Schematic Diagram (3/3)

IC' S	IC202	IC001	IC301	IC302 IC801 IC003 IC604 IC610	IC303 IC607 IC608
TRANSISTORS (Q)	Q202 Q201 Q204 Q203 Q006 Q607 Q608 Q004 Q012 Q205	Q014 Q005 Q001 Q002 Q810 Q013 Q003	Q301 Q303 Q304 Q015 Q008 Q009 Q010 Q011 Q007 Q309 Q310	Q305 Q306 Q631	Q615 Q612

MAIN P.C.Board

PREAMP P.C.Board

FRONT P.C.Board

FE001(FM/MW/LW TUNER MB4E710B)

IC202 CXA1098Q

IC301 NJM4560M

IC302 NJM5532M

IC303 M5236ML

IC801 NJM4560M

IC001 LC7218M

IC002 BU4066F

IC003-1/2 NJM4558M

IC003-2/2 NJM4558M

IC604-1/2 NJM4558M

IC604-2/2 NJM4558M

IC607 LA2231M

IC610 NJM4558M

IC608 15851W02

Q202 DTC124EU

Q201 DTC124EU

Q204 DTC124EU

Q203 DTC124EU

Q006 DTC124E

Q004 DTC124E

Q012 DTC124E

Q607 DTC343T

Q608 DTC343T

Q205 FMG1

Q001 DTC114E

Q002 2SD661U

Q003 2SD661U

Q014 2SD636

Q005 2SD636

Q013 DTC124E

Q810 DTC124E

Q301 FMG1

Q309 DTC343T

Q310 DTC343T

Q303 DTC343T

Q304 DTC343T

Q305 2SD1330

Q306 2SD1330

Q015 2SD601A

Q008 2SD973A

Q009 2SB644

Q011 2SB644

Q010 DTC114E

Q007 2SD636

Q631 DTC124E

Q615 DTC124E

TAPE/RADIO SWITCHING

FM/AM SWITCHING

DOLBY-C SWITCHING

DOLBY-B SWITCHING

L/D SWITCHING

AF SEARCH SWITCHING (SD)

MUTE SWITCHING

PLL CONTROL

FM LEVEL SWITCHING

MW/LW SWITCHING

L.P.F SWITCHING

AF SEARCH SWITCHING

T.INFO VOLUME CONTROL SWITCHING

NF TONE AMP

VOLUME

BALANCE

LOUD SWITCHING

MUTING

PRE AMP

FADER

VOLUME UP SWITCHING

ALARM ADJUST

1/2 VCC

V.STABILIZER

AM+B

FM+B

FM/AM SWITCHING

57KHz B.P.F

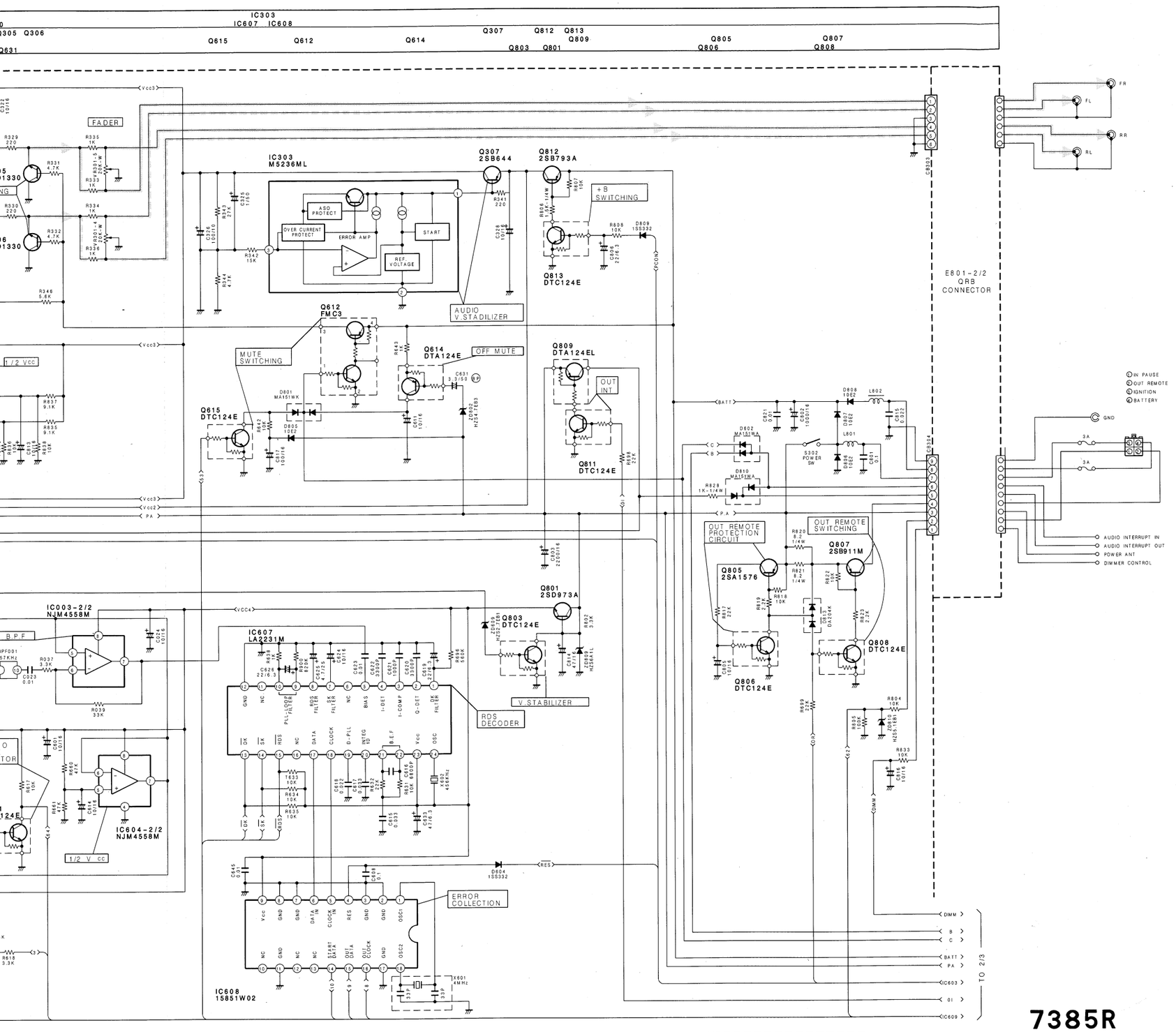
AUDIO CLOSE DETECTOR

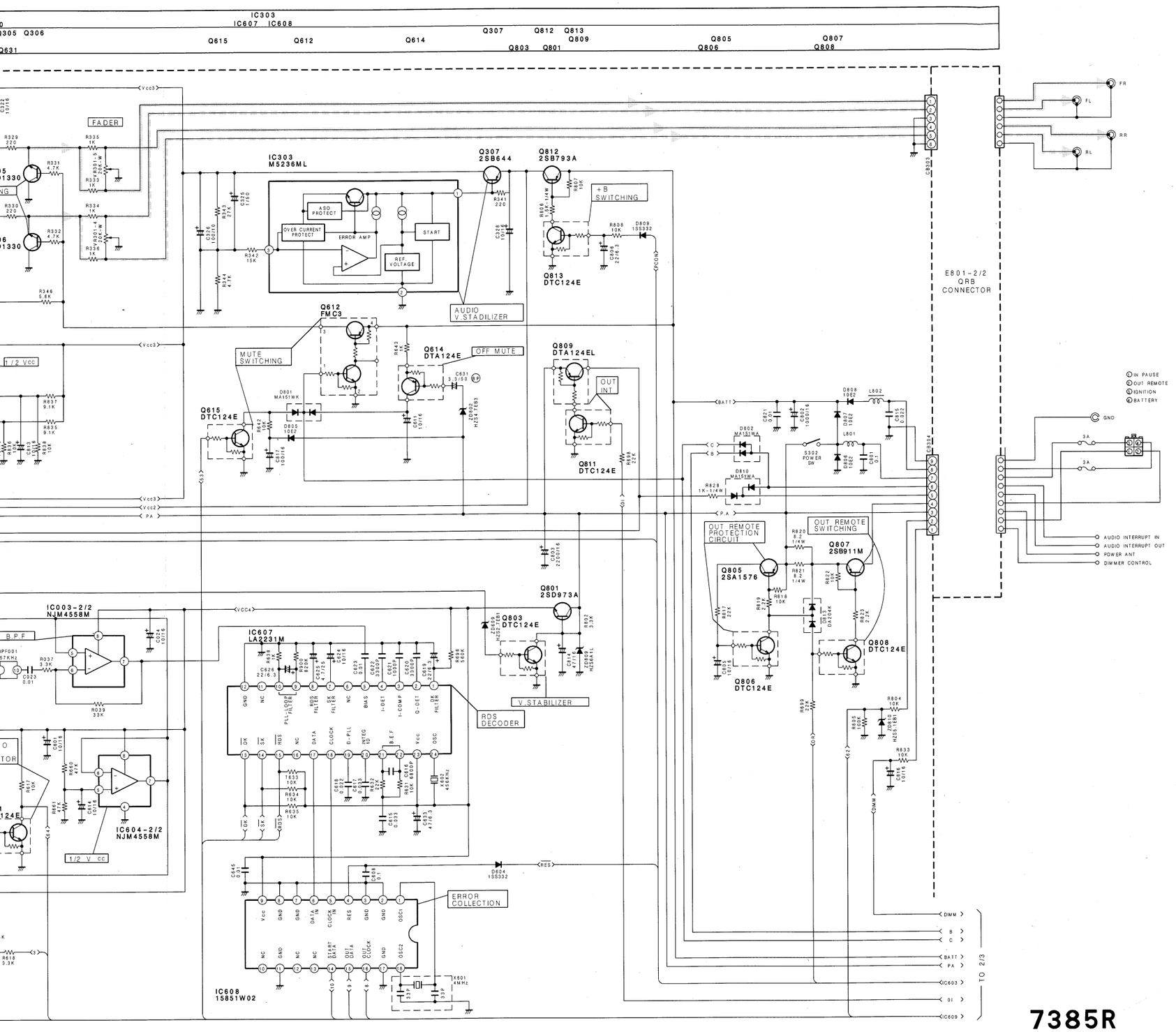
OVER CURRENT PROTECT

MUTE SWITCHING

ALARM

QRB CONNECTOR

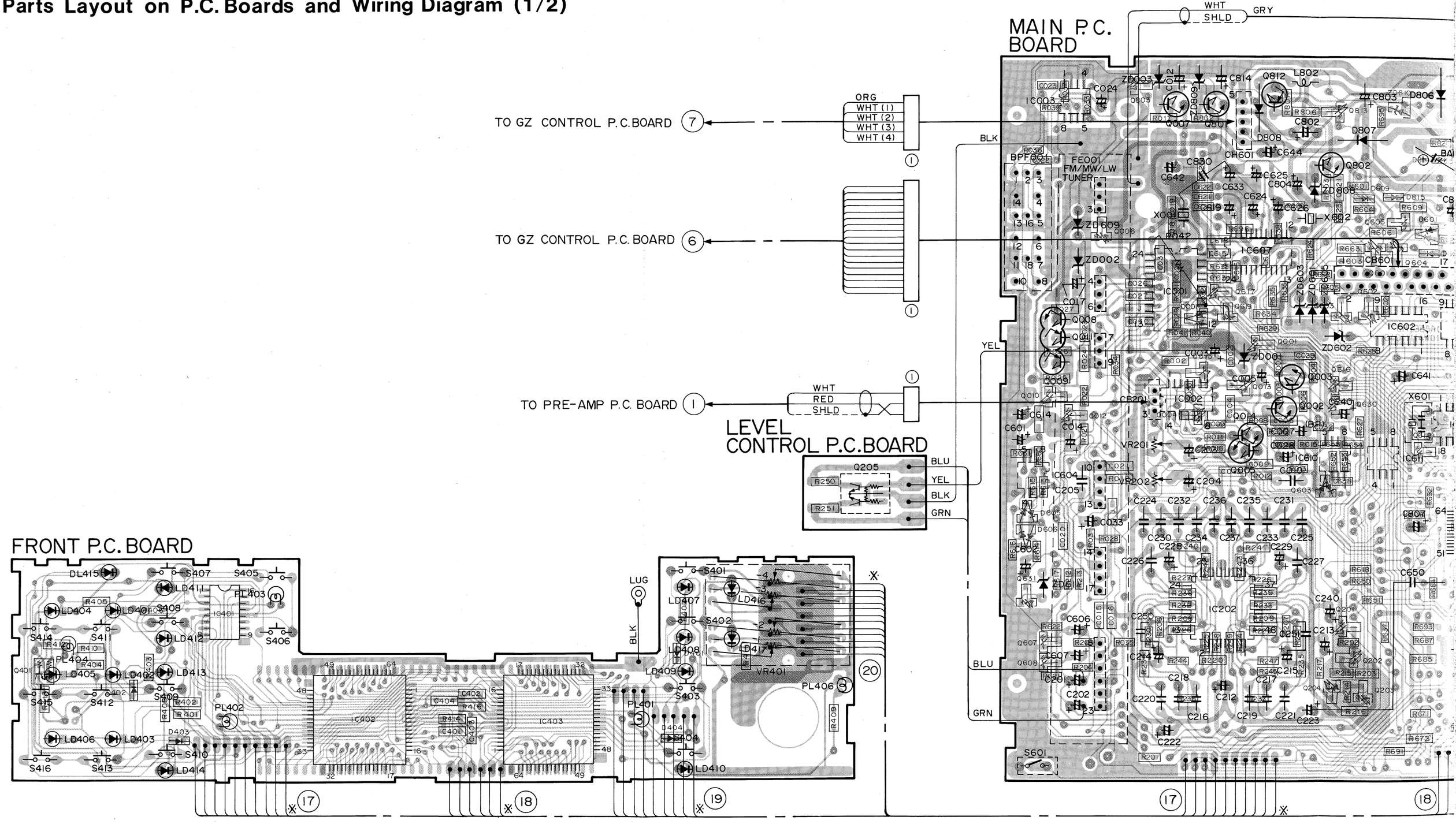

IC303
IC607 IC608
Q615
Q612
Q614
Q307
Q812 Q813
Q809
Q803 Q801
Q805
Q806
Q807
Q808
FADER
IC303
M5236ML
ASO PROTECT
OVER CURRENT PROTECT
ERROR AMP.
START
REF. VOLTAGE
Q307
2SB644
Q812
2SB793A
+B SWITCHING
Q813
DTC124E
AUDIO V.STADILIZER
Q612
FMC3
MUTE SWITCHING
Q614
DTA124E
OFF MUTE
Q615
DTC124E
Q809
DTA124EL
OUT INT
Q811
DTC124E
E801-2/2
ORB
CONNECTOR
FR
FL
RR
RL
IN PAUSE
OUT REMOTE
IGNITION
BATTERY
GND
3A
3A
AUDIO INTERRUPT IN
AUDIO INTERRUPT OUT
POWER ANT
DIMMER CONTROL
S302
POWER SW
OUT REMOTE PROTECTION CIRCUIT
OUT REMOTE SWITCHING
Q805
2SA1576
Q807
2SB911M
Q806
DTC124E
Q808
DTC124E
Q801
2SD973A
Q803
DTC124E
V.STABILIZER
ROS DECODER
IC003-2/2
NJM4558M
IC604-2/2
NJM4558M
1/2 Vcc
IC607
LA2231M
IC608
15851W02
ERROR COLLECTION
X601
4MHz
TO 2/3
DIMM
B
C
BATT
P.A
IC603
01
IC609
7385R


IC303
IC607 IC608
Q615
Q612
Q614
Q307
Q812 Q813
Q809
Q803 Q801
Q805
Q806
Q807
Q808
FADER
IC303
M5236ML
ASO PROTECT
OVER CURRENT PROTECT
ERROR AMP.
START
REF. VOLTAGE
Q307
2SB644
Q812
2SB793A
+B SWITCHING
Q813
DTC124E
AUDIO V.STADILIZER
Q612
FMC3
MUTE SWITCHING
Q614
DTA124E
OFF MUTE
Q615
DTC124E
Q809
DTA124EL
OUT INT
Q811
DTC124E
1/2 VCC
E801-2/2
ORB
CONNECTOR
FR
FL
RR
RL
IN PAUSE
OUT REMOTE
IGNITION
BATTERY
GND
3A
3A
AUDIO INTERRUPT IN
AUDIO INTERRUPT OUT
POWER ANT
DIMMER CONTROL
S302
POWER SW
OUT REMOTE PROTECTION CIRCUIT
OUT REMOTE SWITCHING
Q805
2SA1576
Q807
2SB911M
Q808
DTC124E
Q806
DTC124E
Q801
2SD973A
Q803
DTC124E
V.STABILIZER
ROS DECODER
IC003-2/2
NJM4558M
B.P.F
IC604-2/2
NJM4558M
1/2 V cc
IC607
LA2231M
IC608
15851W02
X601
4MHz
ERROR COLLECTION
E804
E805
DIMM
B
C
BATT
P.A
IC603
01
IC609
TO 2/3

7385R

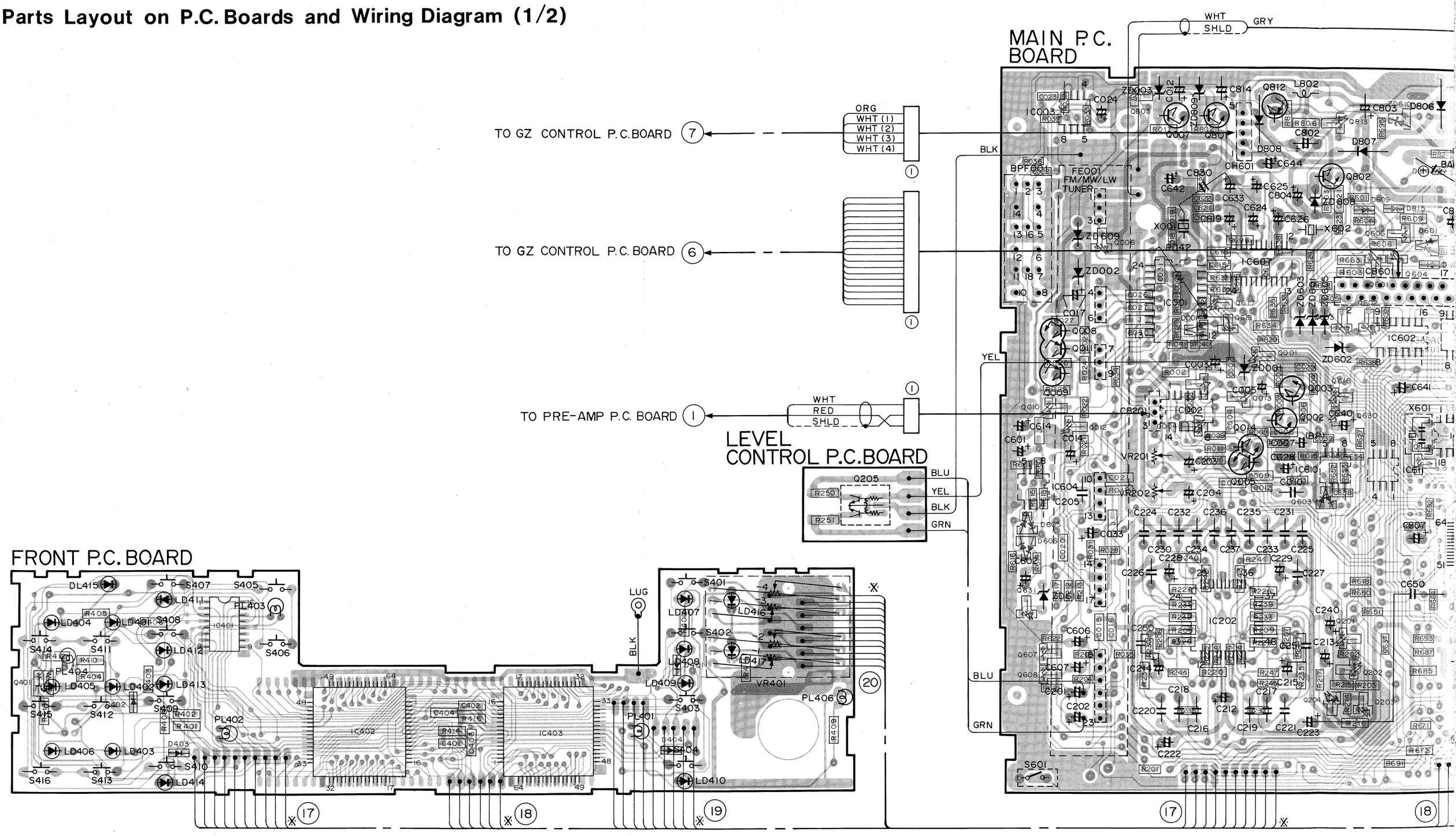
7385R	7385R

Parts Layout on P.C. Boards and Wiring Diagram (1/2)



7385R	7385R

Parts Layout on P.C. Boards and Wiring Diagram (1/2)



7385R	7385R

GRY

ORG(1)
RED(1)
BRN
BLU
GRN
ORG(2)
YEL
RED(2)
GRY

BRN ORG BLU RED YEL GRN

GRY
WHT (ANT)
SHLD (GND)

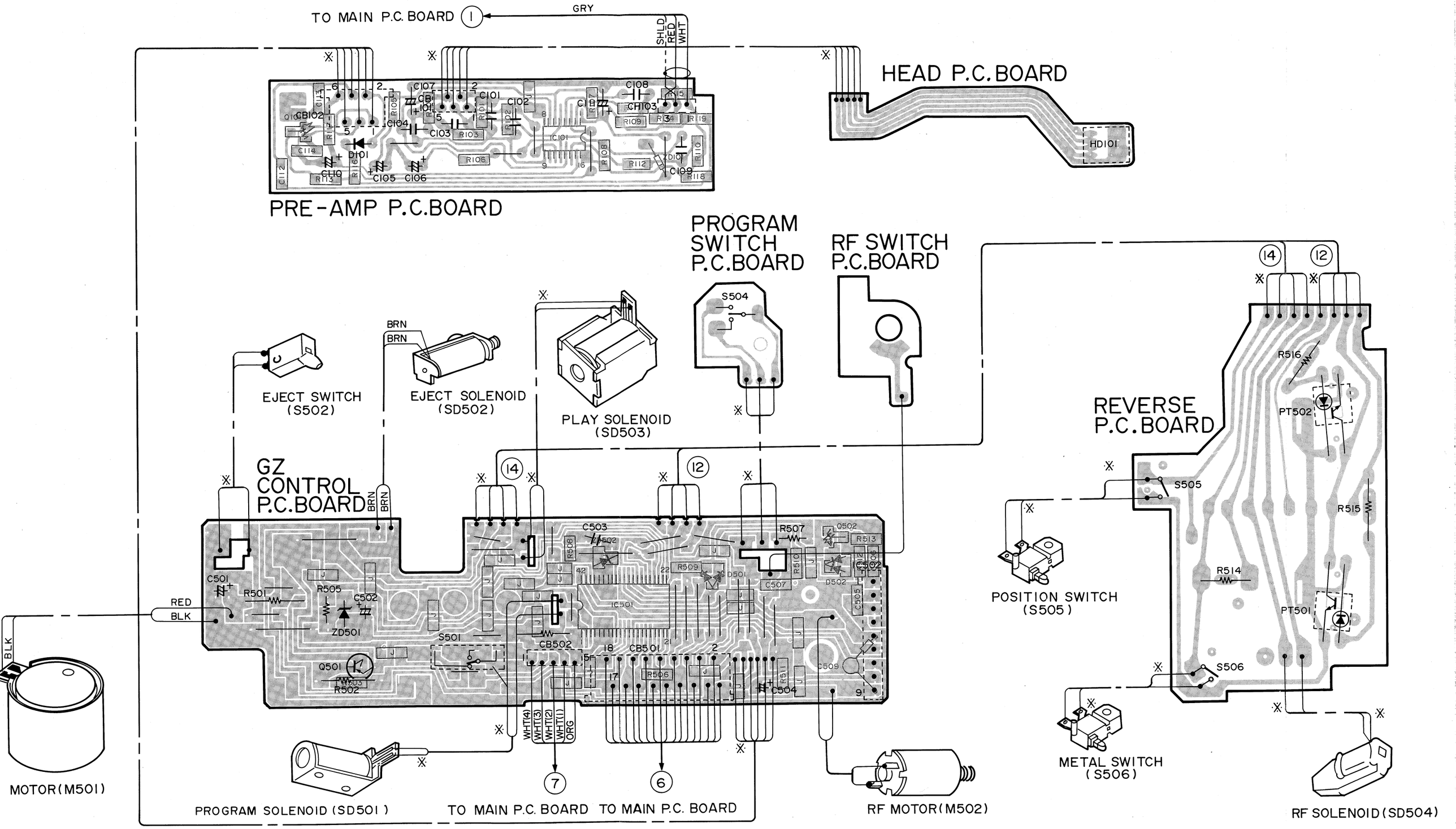
BLU (R-GND)
GRN (L-GND)
YEL (R-L)
ORG (F-L)
RED (R-R)
BRN (F-R)

BLK

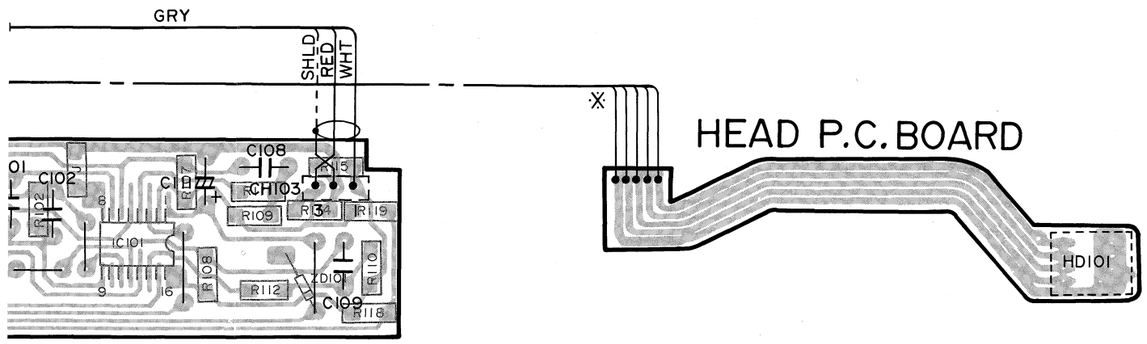
GRY (DIMM)
BLU (IN INT)
GRN (OUT INT)
RED(2) (IN PAU)
ORG(2) (OUT REM)
YEL (P.A)
RED(1) (BAT)
ORG(1) (GND)
BRN (IGN)

ASSY. QRB CONN.
(E801)

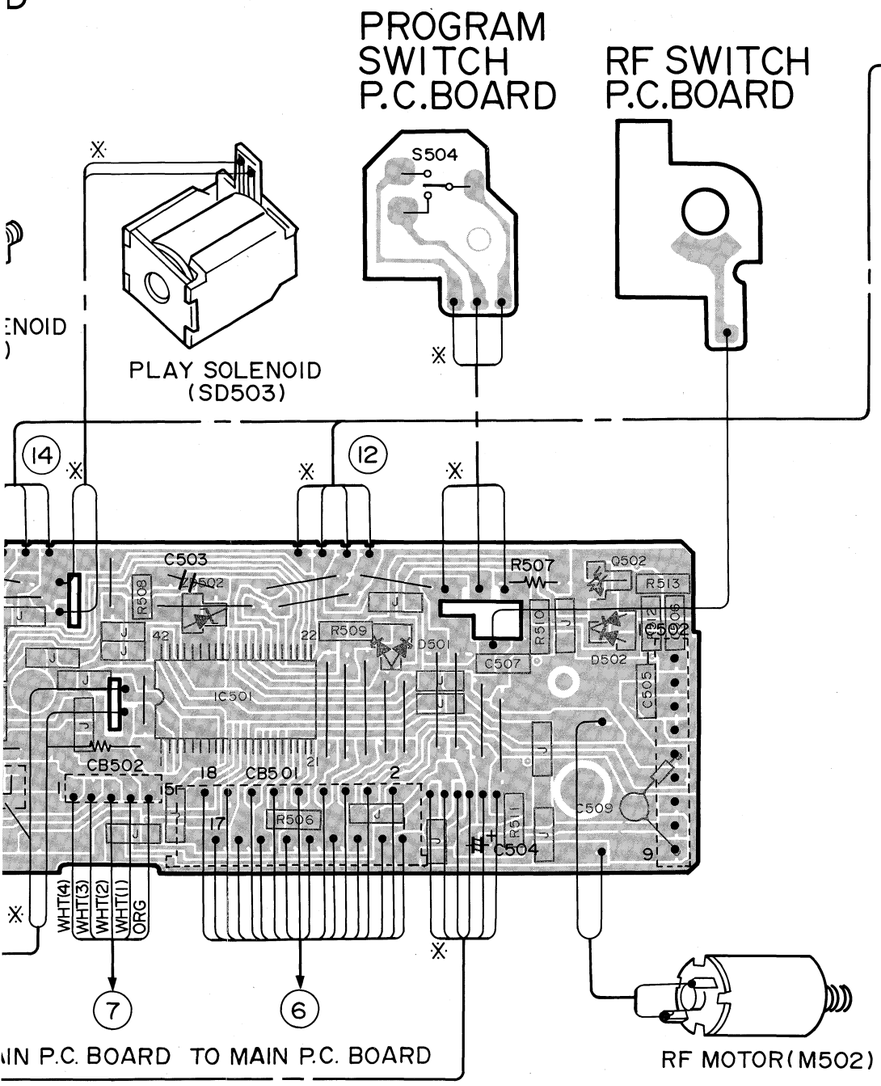
arfs Layout on P.C. Boards and Wiring Diagram (2/2)

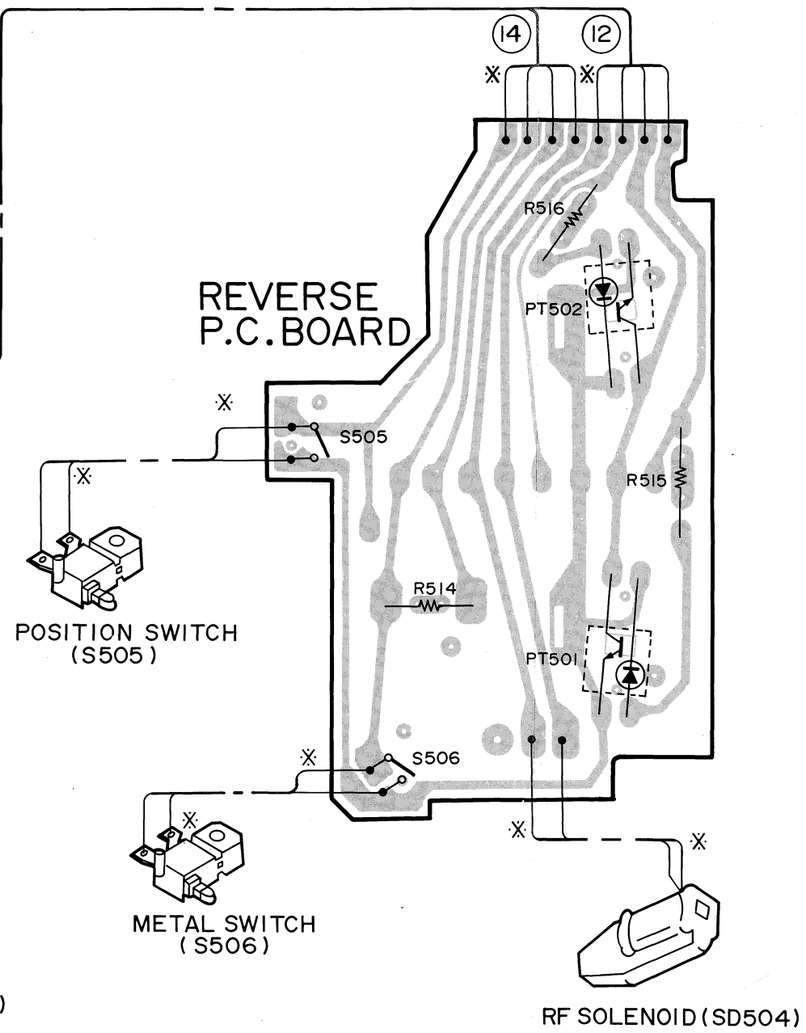


(2/2)


GRY
SHLD
RED
WHT
HEAD P.C.BOARD
HD101
C108
C102
C118
CH103
R109
R134
R119
IC101
R108
R112
ZD101
C109
R110
R118

D


PROGRAM
SWITCH
P.C.BOARD
RF SWITCH
P.C.BOARD
S504
PLAY SOLENOID
(SD503)
14
12
C503
R508
C502
R509
D501
R507
R510
C507
D502
R513
C505
C506
C501
IC501
CB502
CB501
C509
C504
R506
R511
WHT(4)
WHT(3)
WHT(2)
WHT(1)
ORG
7
6
IN P.C. BOARD
TO MAIN P.C. BOARD
RF MOTOR(M502)


REVERSE
P.C.BOARD
14
12
R516
PT502
S505
R515
R514
PT501
S506
POSITION SWITCH
(S505)
METAL SWITCH
(S506)
RF SOLENOID(SD504)

Electrical Parts List

Resistor: Carbon resistors under 1/8 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor: μF-microfarads, pF-picofarads

Abbreviations

CAP.-Capacitor	CER.-Ceramic
CP.-Chip	ELY.-Electrolytic
LED.-Light Emitting Diode	MIC.-Mica
MO.-Metal Oxide Film	MYL.-Mylar
PP.-Polypropylene	SOL.-Solid
TAN.-Tantalum	ZEN.-Zener

Symbol No.	Part No.	Description		
		Main P.C. Board		
IC's				
IC001	51T15853W01	LC7218M		
IC002	51T68999F03	BU4066BF		
IC003	51T93336F01	NJM4558M		
IC202	51T15654W01	CXA1098Q		
IC301	51T90936F01	NJM4560M		
IC302	51T90933F01	NJM5532M		
IC303	51T90890F01	M5236ML		
IC601	51T74191F02	MB88306		
IC602	51T11037W01	BU4021BF		
IC603	51T74191F02	MB88306		
IC604	51T93336F01	NJM4558M		
IC606	51T92166F01	S-8052ALR		
IC607	51T15852W01	LA2231M		
IC608	51T15851W02	15851W02		
IC609	51T15593W06	15593W06		
IC610	51T93336F01	NJM4558M		
IC611	51T12495W02	12495W02		
IC612	51T72309F01	MN1280		
IC801	51T90936F01	NJM4560M		
Transistors				
Q001	48T62967F02	CP., DTC114E		
Q002	48T42182U01	2SD661		
Q003	48T42182U01	2SD661		
Q004	48T62967F03	CP., DTC124E		
Q005	48S40627U04	2SD636		
Q006	48T62967F03	CP., DTC124E		
Q007	48S40627U01	2SD636		
Q008	48T52549F01	2SD973A		
Q009	48T47866F02	2SB644		
Q010	48T62967F02	CP., DTC114E		

Symbol No.	Part No.	Description		
Q011	48T47866F02	2SB644		
Q012	48T62967F03	CP., DTC124E		
Q013	48T62967F03	CP., DTC124E		
Q014	48S40627U04	2SD636		
Q015	48T52438F01	2SD601A		
Q201	48T94606F03	CP., DTC124EU		
Q202	48T94606F03	CP., DTC124EU		
Q203	48T94606F03	CP., DTC124EU		
Q204	48T94606F03	CP., DTC124EU		
Q301	48T73888F08	CP., FMG1		
Q303	48T62967F33	CP., DTC343T		
Q304	48T62967F33	CP., DTC343T		
Q305	48T57337F03	2SD1330		
Q306	48T57337F03	2SD1330		
Q307	48T47866F02	2SB644		
Q309	48T62967F33	CP., DTC343T		
Q310	48T62967F33	CP., DTC343T		
Q601	48T62967F03	CP., DTC124E		
Q602	48T62967F03	CP., DTC124E		
Q603	48T62967F03	CP., DTC124E		
Q604	48T62967F03	CP., DTC124E		
Q606	48T62967F21	CP., DTC124TK		
Q607	48T62967F33	CP., DTC343T		
Q608	48T62967F33	CP., DTC343T		
Q610	48T52549F01	2SD973A		
Q611	48T62967F03	CP., DTC124E		
Q612	48T73888F13	CP., FMC3		
Q614	48T62966F03	CP., DTA124E		
Q615	48T62967F03	CP., DTC124E		
Q616	48T94606F03	CP., DTC124EU		
Q617	48T94606F03	CP., DTC124EU		
Q618	48T94606F05	CP., DTC114TU		
Q619	48T94606F05	CP., DTC114TU		
Q620	48T94606F05	CP., DTC114TU		
Q630	48T94606F03	CP., DTC124EU		
Q631	48T62967F03	CP., DTC124E		
Q632	48T73888F13	CP., FMC3		
Q801	48T52549F01	2SD973A		
Q802	48S40627U01	2SD636		
Q803	48T62967F03	CP., DTC124E		
Q804	48T56031F01	2SD1266		
Q805	48T94581F01	CP., 2SA1576		
Q806	48T62967F03	CP., DTC124E		
Q807	48T70213F01	2SB911M		
Q808	48T62967F03	CP., DTC124E		

Symbol No.	Part No.	Description		
Q809	48T82762F03	DTA124EL		
Q810	48T62967F03	CP., DTC124E		
Q811	48T62967F03	CP., DTC124E		
Q812	48T52547F02	2SB793A		
Q813	48T62967F03	CP., DTC124E		
Diodes				
D001	48T52446F01	MA151WK		
D601	48T52446F01	MA151WK		
D602	48T52445F01	MA151WA		
D603	48T64134F01	CP., DA204K		
D604	48T16617W01	1SS332		
D605	48T64134F01	CP., DA204K		
D606	48T64134F01	CP., DA204K		
D607	48T16617W01	1SS332		
D608	48T16617W01	1SS332		
D609	48T16617W01	1SS332		
D610	48T68828F01	1SS133		
D801	48T52446F01	MA151WK		
D805	48C40235G02	10E2		
D806	48C40235G02	10E2		
D807	48C40235G02	10E2		
D808	48C40235G02	10E2		
D809	48T16617W01	1SS332		
D810	48T52446F01	MA151WK		
D813	48T64134F01	CP., DA204K		
D814	48T16617W01	1SS332		
D815	48T16617W01	1SS332		
D816	48T15254W01	RB400D		
D817	48T15254W01	RB400D		
ZD001	48T83128F25	ZEN., HZS9C1L		
ZD002	48T83128F25	ZEN., HZS9C1L		
ZD003	48T83128F01	ZEN., HZS6A-1L		
ZD301	48T62934F18	ZEN., CP., RD5.1MB1		
ZD601	48T68697F20	ZEN., HZS5.6EB1		
ZD602	48T68697F20	ZEN., HZS5.6EB1		
ZD603	48T68697F20	ZEN., HZS5.6EB1		
ZD605	48T68697F20	ZEN., HZS5.6EB1		
ZD607	48T68697F03	ZEN., HZS3.0EB1		
ZD608	48T68697F16	ZEN., HZS4.7EB3		
ZD609	48T68697F01	ZEN., HZS2.7EB1		
ZD610	48T62934F18	ZEN., CP., RD5.1MB1		

Symbol No.	Part No.	Description		
ZD611	48T68697F01	ZEN., HZS2.7EB1		
ZD612	48T90517F25	ZEN., HZS5.1NB3		
ZD802	48T68697F16	ZEN., HZS4.7EB3		
ZD807	48T90517F25	ZEN., HZS5.1NB3		
ZD808	48T83128F08	ZEN., HZS6C2L		
ZD809	48T83128F01	ZEN., HZS6A-1L		
ZD810	48T68697F17	ZEN., HZS5.1EB1		
ZD811	48T83128F28	ZEN., HZS11A1L		
Capacitors				
C001	08S53332F47	CP., 0.01μF		
C002	08S53332F47	CP., 0.01μF		
C003	23S92017F01	ELY., 220μF/10V		
C004	08S53332F51	CP., 0.022μF		
C005	23T74437F46	TAN., 0.33μF/35V		
C006	08S53332F47	CP., 0.01μF		
C007	23T82372F19	ELY., (BP) 2.2μF/50V		
C008	08T15399W03	CP., 0.047μF		
C009	08S53332F39	CP., 2200pF		
C010	08T90316F17	TF., 0.01pF		
C012	23S57007F09	ELY., 10μF/16V		
C013	08S53332F35	CP., 1000pF		
C014	23S61523F09	ELY., 22μF/10V		
C015	08S53332F51	CP., 0.022μF		
C016	08S53332F51	CP., 0.022μF		
C017	23S61523F11	ELY., 47μF/10V		
C018	08S65128F21	CP., 27pF		
C019	08S65128F21	CP., 27pF		
C020	08S53332F47	CP., 0.01μF		
C021	08S53332F55	CP., 0.047μF		
C022	08S65128F69	CP., 0.01μF		
C023	08S65128F69	CP., 0.01μF		
C024	23S61523F12	ELY., 10μF/16V		
C025	23S61523F11	ELY., 47μF/10V		
C026	08S53332F23	CP., 100pF		
C027	08S53332F23	CP., 100pF		
C028	08T50579F13	TF, 0.1μF		
C029	08S53332F47	CP., 0.01μF		
C030	08S53332F35	CP., 1000pF		
C031	08S53332F47	CP., 0.01μF		
C032	08S65128F69	CP., 0.01μF		
C033	23S61523F29	ELY., 1μF/50V		
C201	23S61523F29	ELY., 1μF/50V		
C202	23S61523F29	ELY., 1μF/50V		
C203	23T15901W14	ELY., 10μF/16V		

Symbol No.	Part No.	Description		
C204	23T15901W14	ELY..	10μF/16V	
C205	08T90316F27	TF..	0.068μF	
C212	23T15901W13	ELY..	100μF/10V	
C213	23S61523F09	ELY..	22μF/10V	
C214	23S61523F08	ELY..	100μF /6.3V	
C215	23S61523F08	ELY..	100μF /6.3V	
C216	08T90316F09	TF..	2200pF	
C217	08T90316F09	TF..	2200pF	
C218	08T90316F09	TF..	2200pF	
C219	08T90316F09	TF..	2200pF	
C220	08T90316F12	TF..	3900pF	
C221	08T90316F12	TF..	3900pF	
C222	23S61523F28	ELY..	0.47μF/50V	
C223	23S61523F28	ELY..	0.47μF/50V	
C224	08T90316F31	TF..	0.15μF	
C225	08T57851F15	TF..	0.15μF	
C226	08T90316F19	TF..	0.015μF	
C227	08T90316F19	TF..	0.015μF	
C228	23S61523F26	ELY..	0.22μF/50V	
C229	23S61523F26	ELY..	0.22μF/50V	
C230	08T90316F27	TF..	0.068μF	
C231	08T90316F27	TF..	0.068μF	
C232	08T90316F26	TF..	0.056μF	
C233	08T90316F26	TF..	0.056μF	
C234	08T90316F14	TF..	5600pF	
C235	08T90316F14	TF..	5600pF	
C236	08T90316F17	TF..	0.01μF	
C237	08T90316F17	TF..	0.01μF	
C240	23S61523F12	ELY..	10μF/16V	
C250	21C45322G27	CER..	470pF	
C251	21C45322G27	CER..	470pF	
C301	23T15901W14	ELY..	10μF/16V	
C302	23T15901W14	ELY..	10μF/16V	
C303	08T93406F15	PP..	390pF	
C304	08T93406F15	PP..	390pF	
C305	08T57705F78	MYL..	0.082μF	
C306	08T57705F78	MYL..	0.082μF	
C307	08T57705F81	MYL..	0.15μF	
C308	08T57705F81	MYL..	0.15μF	
C309	08T93406F13	PP..	330pF	
C310	08T93406F13	PP..	330pF	
C311	08S53332F14	CP..	18pF	
C312	08S53332F14	CP..	18pF	
C313	23T15901W14	ELY..	10μF/16V	
C314	23T15901W14	ELY..	10μF/16V	

Symbol No.	Part No.	Description		
C315	23T15901W14	ELY..	10μF/16V	
C316	23S61523F12	ELY..	10μF/16V	
C317	08T90316F29	TF..	0.1μF	
C318	08T90316F29	TF..	0.1μF	
C319	23C44780P20	ELY..	100μF/10V	
C320	23T15901W30	ELY..	2.2μF/50V	
C321	23T15901W30	ELY..	2.2μF/50V	
C322	23T15901W14	ELY..	10μF/16V	
C323	23T15901W14	ELY..	10μF/16V	
C324	23T15901W14	ELY..	10μF/16V	
C325	23T15901W29	ELY..	1μF/50V	
C326	23T00134L17	ELY..	100μF/10V	
C328	23T15901W14	ELY..	10μF/16V	
C329	08S65128F69	CP..	0.01μF	
C601	23S61523F12	ELY..	10μF/16V	
C602	23S61523F12	ELY..	10μF/16V	
C606	23S61523F12	ELY..	10μF/16V	
C607	23S61523F12	ELY..	10μF/16V	
C608	08S65128F76	CP..	0.1μF	
C611	23S57422F09	ELY..	10μF/16V	
C614	23S61523F12	ELY..	10μF/16V	
C615	08T15399W02	CP..	0.033μF	
C616	08S65128F67	CP..	6800pF	
C617	08T15399W02	CP..	0.033μF	
C618	08T15399W01	CP..	0.022μF	
C619	23S61523F05	ELY..	22μF /6.3V	
C620	08S65128F63	CP..	3300pF	
C621	08S65128F57	CP..	1000pF	
C622	08S65128F63	CP..	3300pF	
C623	08S65128F69	CP..	0.01μF	
C624	23S61523F12	ELY..	10μF/16V	
C625	23S61523F17	ELY..	4.7μF/25V	
C626	23S61523F05	ELY..	22μF /6.3V	
C627	08S53332F25	CP..	150pF	
C628	08S53332F25	CP..	150pF	
C629	08S65128F18	CP..	20pF	
C630	08S65128F22	CP..	30pF	
C631	23T41366F42	ELY..	(BP) 3.3μF/50V	
C633	23S61523F11	ELY..	47μF/10V	
C637	08S65128F69	CP..	0.01μF	
C638	08T15399W02	CP..	0.033μF	
C640	23S61523F29	ELY..	1μF/50V	
C641	23S61523F05	ELY..	22μF /6.3V	
C642	23S61523F29	ELY..	1μF/50V	
C643	23C44780P20	ELY..	100μF/10V	

Symbol No.	Part No.	Description		
C644	23S61523F12	ELY.. 10μF/16V		
C645	08S53332F47	CP.. 0.01μF		
C650	23C44780P20	ELY.. 100μF/10V		
C801	08S53332F57	CP.. 0.1μF		
C802	23T00134L36	ELY.. 1000μF/16V		
C803	23T00135L33	ELY.. 2200μF/16V		
C804	23S61523F29	ELY.. 1μF/50V		
C805	23S61523F12	ELY.. 10μF/16V		
C806	23S61523F05	ELY.. 22μF /6.3V		
C807	23S92017F01	ELY.. 220μF/10V		
C808	08T15399W01	CP.. 0.022μF		
C809	23S61523F12	ELY.. 10μF/16V		
C810	23T15901W14	ELY.. 10μF/16V		
C811	23T15901W14	ELY.. 10μF/16V		
C812	23T15901W14	ELY.. 10μF/16V		
C813	23T15901W14	ELY.. 10μF/16V		
C814	23S57007F15	ELY.. 47μF/16V		
C815	08S53332F51	CP.. 0.022μF		
C816	23S61523F12	ELY.. 10μF/16V		
C817	23S92017F03	ELY.. 100μF/16V		
C820	08S53332F47	CP.. 0.01μF		
C821	08S53332F47	CP.. 0.01μF		
C830	21C45322G33	CER.. 0.047μF		
Resistors				
R001	06S64995F53	CP.. 1K ohm 1/16W		
R002	06T70072F41	CP.. 330 ohm 1/4W		
R003	06S64995F65	CP.. 3.3K ohm 1/16W		
R004	06S64995F53	CP.. 1K ohm 1/16W		
R005	06S64995F65	CP.. 3.3K ohm 1/16W		
R006	06S64995F53	CP.. 1K ohm 1/16W		
R007	06S64995F05	CP.. 10 ohm 1/16W		
R008	06S64995F57	CP.. 1.5K ohm 1/16W		
R009	06S64995F71	CP.. 5.6K ohm 1/16W		
R011	06S64995F47	CP.. 560 ohm 1/16W		
R012	06S64995F85	CP.. 22K ohm 1/16W		
R013	06S64995F71	CP.. 5.6K ohm 1/16W		
R015	06S64995F37	CP.. 220 ohm 1/16W		
R016	06S64995F53	CP.. 1K ohm 1/16W		
R017	06S53330F65	CP.. 3.3K ohm 1/8W		
R018	06S53331F26	CP.. 1M ohm 1/8W		
R021	06S53330F53	CP.. 1K ohm 1/8W		
R022	06S64995F77	CP.. 10K ohm 1/16W		
R023	06S53330F65	CP.. 3.3K ohm 1/8W		
R024	06S53330F65	CP.. 3.3K ohm 1/8W		

Symbol No.	Part No.	Description		
R025	06T70072F53	CP.. 1K ohm 1/4W		
R026	06S53330F65	CP.. 3.3K ohm 1/8W		
R027	06T70072F53	CP.. 1K ohm 1/4W		
R028	06S64995F69	CP.. 4.7K ohm 1/16W		
R029	06S64995F77	CP.. 10K ohm 1/16W		
R030	06S64995F53	CP.. 1K ohm 1/16W		
R031	06S64995F77	CP.. 10K ohm 1/16W		
R032	06S64995F77	CP.. 10K ohm 1/16W		
R033	06S64996F02	CP.. 100K ohm 1/16W		
R034	06S64995F93	CP.. 47K ohm 1/16W		
R035	06S64995F95	CP.. 56K ohm 1/16W		
R036	06S64995F65	CP.. 3.3K ohm 1/16W		
R037	06S64995F65	CP.. 3.3K ohm 1/16W		
R039	06S64995F89	CP.. 33K ohm 1/16W		
R040	06S64995F77	CP.. 10K ohm 1/16W		
R041	06S64995F77	CP.. 10K ohm 1/16W		
R201	06S64995F85	CP.. 22K ohm 1/16W		
R202	06S64995F75	CP.. 8.2K ohm 1/16W		
R203	06S53330F79	CP.. 12K ohm 1/8W		
R204	06S64995F61	CP.. 2.2K ohm 1/16W		
R205	06S64995F61	CP.. 2.2K ohm 1/16W		
R206	06S64995F81	CP.. 15K ohm 1/16W		
R207	06S64995F81	CP.. 15K ohm 1/16W		
R208	06S53330F60	CP.. 2K ohm 1/8W		
R209	06S53330F60	CP.. 2K ohm 1/8W		
R212	06S64996F02	CP.. 100K ohm 1/16W		
R213	06S64996F02	CP.. 100K ohm 1/16W		
R214	06S64995F75	CP.. 8.2K ohm 1/16W		
R215	06S64995F29	CP.. 100 ohm 1/16W		
R216	06S53330F79	CP.. 12K ohm 1/8W		
R217	06S64995F29	CP.. 100 ohm 1/16W		
R220	06S53331F05	CP.. 130K ohm 1/8W		
R224	06S64995F60	CP.. 2K ohm 1/16W		
R225	06S64995F60	CP.. 2K ohm 1/16W		
R226	06S53330F83	CP.. 18K ohm 1/8W		
R227	06S53330F83	CP.. 18K ohm 1/8W		
R228	06S53330F63	CP.. 2.7K ohm 1/8W		
R229	06S53330F63	CP.. 2.7K ohm 1/8W		
R230	06S64995F65	CP.. 3.3K ohm 1/16W		
R231	06S64995F65	CP.. 3.3K ohm 1/16W		
R232	06S53331F26	CP.. 1M ohm 1/8W		
R233	06S53331F26	CP.. 1M ohm 1/8W		
R234	06S53330F47	CP.. 560 ohm 1/8W		
R235	06S53330F47	CP.. 560 ohm 1/8W		
R236	06S64995F85	CP.. 22K ohm 1/16W		

Symbol No.	Part No.	Description		
R237	06S64995F85	CP.. 22K ohm 1/16W		
R238	06S53330F74	CP.. 7.5K ohm 1/8W		
R239	06S53330F74	CP.. 7.5K ohm 1/8W		
R240	06S53330F49	CP.. 680 ohm 1/8W		
R241	06S53330F49	CP.. 680 ohm 1/8W		
R242	06S53330F76	CP.. 9.1K ohm 1/8W		
R243	06S53330F76	CP.. 9.1K ohm 1/8W		
R244	06S64995F85	CP.. 22K ohm 1/16W		
R245	06S64995F85	CP.. 22K ohm 1/16W		
R247	06S64995F85	CP.. 22K ohm 1/16W		
R248	06S64995F85	CP.. 22K ohm 1/16W		
R249	06S64995F85	CP.. 22K ohm 1/16W		
R301	06S64995F71	CP.. 5.6K ohm 1/16W		
R302	06S64995F71	CP.. 5.6K ohm 1/16W		
R303	06S64995F71	CP.. 5.6K ohm 1/16W		
R304	06S64995F71	CP.. 5.6K ohm 1/16W		
R305	06S64995F71	CP.. 5.6K ohm 1/16W		
R306	06S64995F71	CP.. 5.6K ohm 1/16W		
R307	06S64995F71	CP.. 5.6K ohm 1/16W		
R308	06S64995F71	CP.. 5.6K ohm 1/16W		
R309	06S53330F91	CP.. 39K ohm 1/8W		
R310	06S53330F91	CP.. 39K ohm 1/8W		
R311	06S64996F26	CP.. 1M ohm 1/16W		
R312	06S64996F26	CP.. 1M ohm 1/16W		
R314	06S64995F29	CP.. 100 ohm 1/16W		
R315	06S64995F29	CP.. 100 ohm 1/16W		
R316	06S53330F77	CP.. 10K ohm 1/8W		
R317	06S64995F59	CP.. 1.8K ohm 1/16W		
R318	06S64995F59	CP.. 1.8K ohm 1/16W		
R319	06S64995F45	CP.. 470 ohm 1/16W		
R320	06S53330F29	CP.. 100 ohm 1/8W		
R321	06S53330F29	CP.. 100 ohm 1/8W		
R322	06S53330F97	CP.. 68K ohm 1/8W		
R323	06S53330F97	CP.. 68K ohm 1/8W		
R324	06S53330F75	CP.. 8.2K ohm 1/8W		
R325	06S53330F75	CP.. 8.2K ohm 1/8W		
R326	06S53330F85	CP.. 22K ohm 1/8W		
R327	06S53330F85	CP.. 22K ohm 1/8W		
R329	06S64995F37	CP.. 220 ohm 1/16W		
R330	06S64995F37	CP.. 220 ohm 1/16W		
R331	06S64995F69	CP.. 4.7K ohm 1/16W		
R332	06S64995F69	CP.. 4.7K ohm 1/16W		
R333	06S64995F53	CP.. 1K ohm 1/16W		
R334	06S64995F53	CP.. 1K ohm 1/16W		
R335	06S64995F53	CP.. 1K ohm 1/16W		

Symbol No.	Part No.	Description		
R336	06S64995F53	CP.. 1K ohm 1/16W		
R341	06S53330F37	CP.. 220 ohm 1/8W		
R342	06S53330F81	CP.. 15K ohm 1/8W		
R343	06S53330F87	CP.. 27K ohm 1/8W		
R344	06S53330F69	CP.. 4.7K ohm 1/8W		
R346	06S64995F71	CP.. 5.6K ohm 1/16W		
R601	06S64995F77	CP.. 10K ohm 1/16W		
R602	06S64995F77	CP.. 10K ohm 1/16W		
R603	06S53330F77	CP.. 10K ohm 1/8W		
R604	06S64995F77	CP.. 10K ohm 1/16W		
R605	06S64995F77	CP.. 10K ohm 1/16W		
R606	06S53330F53	CP.. 1K ohm 1/8W		
R607	06S64995F77	CP.. 10K ohm 1/16W		
R608	06S64995F77	CP.. 10K ohm 1/16W		
R609	06T70072F49	CP.. 680 ohm 1/4W		
R613	06S64995F77	CP.. 10K ohm 1/16W		
R614	06S64995F69	CP.. 4.7K ohm 1/16W		
R615	06S64995F69	CP.. 4.7K ohm 1/16W		
R616	06S64995F77	CP.. 10K ohm 1/16W		
R617	06S64995F77	CP.. 10K ohm 1/16W		
R618	06S64995F65	CP.. 3.3K ohm 1/16W		
R621	06S64995F77	CP.. 10K ohm 1/16W		
R622	06S64995F77	CP.. 10K ohm 1/16W		
R623	06S64996F02	CP.. 100K ohm 1/16W		
R624	06S64996F02	CP.. 100K ohm 1/16W		
R625	06S64995F77	CP.. 10K ohm 1/16W		
R626	06S64995F77	CP.. 10K ohm 1/16W		
R627	06S64995F77	CP.. 10K ohm 1/16W		
R628	06S64995F77	CP.. 10K ohm 1/16W		
R629	06S64995F77	CP.. 10K ohm 1/16W		
R631	06S64995F77	CP.. 10K ohm 1/16W		
R632	06S64995F85	CP.. 22K ohm 1/16W		
R633	06S64995F77	CP.. 10K ohm 1/16W		
R634	06S53330F77	CP.. 10K ohm 1/8W		
R635	06S64995F77	CP.. 10K ohm 1/16W		
R638	06S64995F53	CP.. 1K ohm 1/16W		
R639	06S64995F93	CP.. 47K ohm 1/16W		
R642	06S53330F77	CP.. 10K ohm 1/8W		
R643	06S53330F53	CP.. 1K ohm 1/8W		
R646	06S64996F26	CP.. 1M ohm 1/16W		
R647	06S64996F38	CP.. 10M ohm 1/16W		
R648	06S64996F02	CP.. 100K ohm 1/16W		
R650	06S64996F04	CP.. 120K ohm 1/16W		
R651	06S64995F93	CP.. 47K ohm 1/16W		
R652	06S64995F91	CP.. 39K ohm 1/16W		

Symbol No.	Part No.	Description		
R653	06S64996F02	CP., 100K ohm 1/16W		
R654	06S64996F04	CP., 120K ohm 1/16W		
R655	06S64996F03	CP., 110K ohm 1/16W		
R659	06T70072F53	CP., 1K ohm 1/4W		
R660	06S64995F93	CP., 47K ohm 1/16W		
R661	06S64995F93	CP., 47K ohm 1/16W		
R662	06S64995F77	CP., 10K ohm 1/16W		
R663	06S53330F77	CP., 10K ohm 1/8W		
R670	06S64995F93	CP., 47K ohm 1/16W		
R671	06S64995F93	CP., 47K ohm 1/16W		
R672	06S53330F93	CP., 47K ohm 1/8W		
R673	06S64995F93	CP., 47K ohm 1/16W		
R674	06S64995F93	CP., 47K ohm 1/16W		
R675	06S64995F93	CP., 47K ohm 1/16W		
R676	06S64995F93	CP., 47K ohm 1/16W		
R677	06S64995F93	CP., 47K ohm 1/16W		
R678	06S64995F93	CP., 47K ohm 1/16W		
R679	06S64995F93	CP., 47K ohm 1/16W		
R680	06S64995F69	CP., 4.7K ohm 1/16W		
R681	06S64995F93	CP., 47K ohm 1/16W		
R682	06S64995F93	CP., 47K ohm 1/16W		
R683	06S64995F85	CP., 22K ohm 1/16W		
R684	06S64995F93	CP., 47K ohm 1/16W		
R685	06S53330F93	CP., 47K ohm 1/8W		
R686	06S64995F93	CP., 47K ohm 1/16W		
R687	06S64995F93	CP., 47K ohm 1/16W		
R688	06S53330F93	CP., 47K ohm 1/8W		
R689	06S64995F93	CP., 47K ohm 1/16W		
R690	06S64995F93	CP., 47K ohm 1/16W		
R691	06S64995F69	CP., 4.7K ohm 1/16W		
R692	06S64995F69	CP., 4.7K ohm 1/16W		
R693	06S64995F93	CP., 47K ohm 1/16W		
R694	06S64995F93	CP., 47K ohm 1/16W		
R695	06S64995F85	CP., 22K ohm 1/16W		
R696	06S53331F20	CP., 560K ohm 1/8W		
R698	06S64995F85	CP., 22K ohm 1/16W		
R699	06S64995F85	CP., 22K ohm 1/16W		
R802	06S53330F65	CP., 3.3K ohm 1/8W		
R803	06S53330F77	CP., 10K ohm 1/8W		
R804	06S53330F77	CP., 10K ohm 1/8W		
R805	06S64996F02	CP., 100K ohm 1/16W		
R806	06T70072F57	CP., 1.5K ohm 1/4W		
R807	06S53330F77	CP., 10K ohm 1/8W		
R808	06S64995F77	CP., 10K ohm 1/16W		
R811	06S64995F69	CP., 4.7K ohm 1/16W		

Symbol No.	Part No.	Description		
R813	06T70072F21	CP., 47 ohm 1/4W		
R814	06T70072F21	CP., 47 ohm 1/4W		
R815	06T70072F21	CP., 47 ohm 1/4W		
R816	06T70072F45	CP., 470 ohm 1/4W		
R817	06S53330F85	CP., 22K ohm 1/8W		
R818	06S53330F77	CP., 10K ohm 1/8W		
R819	06S53330F61	CP., 2.2K ohm 1/8W		
R820	06T70072F04	CP., 8.2 ohm 1/4W		
R821	06T70072F04	CP., 8.2 ohm 1/4W		
R822	06S53330F77	CP., 10K ohm 1/8W		
R823	06S53330F61	CP., 2.2K ohm 1/8W		
R824	06S64995F53	CP., 1K ohm 1/16W		
R825	06S64995F53	CP., 1K ohm 1/16W		
R827	06S53330F61	CP., 2.2K ohm 1/8W		
R828	06T70072F53	CP., 1K ohm 1/4W		
R833	06S64995F77	CP., 10K ohm 1/16W		
R835	06S53330F76	CP., 9.1K ohm 1/8W		
R836	06S53330F77	CP., 10K ohm 1/8W		
R837	06S53330F76	CP., 9.1K ohm 1/8W		
R838	06S53330F77	CP., 10K ohm 1/8W		
R840	06S64995F69	CP., 4.7K ohm 1/16W		
R841	06S64995F69	CP., 4.7K ohm 1/16W		
R842	06S64995F77	CP., 10K ohm 1/16W		
R843	06S53330F69	CP., 4.7K ohm 1/8W		
R844	06S53330F65	CP., 3.3K ohm 1/8W		
R845	06S64996F02	CP., 100K ohm 1/16W		
R900	06S64996F24	CP., 820K ohm 1/16W		
VR201	18T42748F13	Variable 10K ohm		
VR202	18T42748F13	Variable 10K ohm		
VR301	18T15283W04	Volume, Rotary (Volume/Barance/Fader, Power/Play Program Switch)		
S301				
S302				
VR302	18T60065F13	Variable 10K ohm		
Coils				
L801	25C40894G11	Choke, Trans		
L802	24T58149F02	Inductor 1.2mH		
Switch				
S601	40T82548F01	TACT, SKELAJ(QRB)		

Symbol No.	Part No.	Description		
Filter				
BPF001	24T12256W01	B.P.F. 57KHz		
Crystal's				
X001	48T84663F01	7.2MHz		
X601	91T15848W01	Cer., Lock 4MHz		
X602	91T15857W01	Cer., Lock 456KHz		
X603	91T92651F01	Cer., Lock 4.19MHz		
X604	48T15849W01	32.768KHz		
Front P.C.Board				
IC's				
IC401	51T74191F02	MB88306		
IC402	51T83905F01	LC7582		
IC403	51T83905F01	LC7582		
Transistor				
Q401	48T73888F08	CP..FMG1		
Diodes/LED's				
D401	48T90681F01	CP., MA110		
D402	48T90681F01	CP., MA110		
D403	48T90681F01	CP., MA110		
D404	48T90681F01	CP., MA110		
LD401	48T90476F02	CP., BR1102W		
LD402	48T90476F02	CP., BR1102W		
LD403	48T90476F02	CP., BR1102W		
LD404	48T90476F02	CP., BR1102W		
LD405	48T90476F02	CP., BR1102W		
LD406	48T90476F02	CP., BR1102W		
LD407	48T15700W02	LED., MBG4868K (GRN)		
LD408	48T15700W02	LED., MBG4868K (GRN)		
LD409	48T15700W02	LED., MBG4868K (GRN)		
LD410	48T15700W02	LED., MBG4868K (GRN)		
LD411	48T15700W02	LED., MBG4868K (GRN)		

Symbol No.	Part No.	Description		
LD412	48T15700W02	LED., MBG4868K (GRN)		
LD413	48T15700W02	LED., MBG4868K (GRN)		
LD414	48T15700W02	LED., MBG4868K (GRN)		
LD415	48T52953F06	LED., EAA3432S (ORG)		
Capacitors				
C401	08S53332F33	CP., 680pF		
C402	08S53332F33	CP., 680pF		
C403	08S53332F57	CP., 0.1μF		
C404	08S53332F57	CP., 0.1μF		
Resistors				
R401	06T70072F33	CP., 150 ohm 1/4W		
R402	06T70072F33	CP., 150 ohm 1/4W		
R403	06T70072F33	CP., 150 ohm 1/4W		
R404	06T70072F33	CP., 150 ohm 1/4W		
R405	06T70072F33	CP., 150 ohm 1/4W		
R406	06T70072F33	CP., 150 ohm 1/4W		
R407	06T70072F41	CP., 330 ohm 1/4W		
R408	06T70072F41	CP., 330 ohm 1/4W		
R409	06T70072F21	CP., 47 ohm 1/4W		
R410	06T70072F21	CP., 47 ohm 1/4W		
R411	06T70072F47	CP., 560 ohm 1/4W		
R412	06T70072F19	CP., 39 ohm 1/4W		
R413	06S53330F77	CP., 10K ohm 1/8W		
R414	06S53330F94	CP., 51K ohm 1/8W		
R415	06S53330F94	CP., 51K ohm 1/8W		
VR401 LD416 LD417	18T93886F03	Volume,Slide 100K ohm Bx2 (BASS/TREBLE) (GRN)		
Lamps				
PL401	65T95083F01	Pilot 6.7V-85mA		
PL402	65T95083F01	Pilot 6.7V-85mA		
PL403	65T94892F02	Pilot 6V-65mA		
PL404	65T95274F02	Pilot 6V-70mA		
PL405	65T95274F02	Pilot 6V-70mA		
PL406	65T73096F02	Pilot 6V-65mA		

Symbol No.	Part No.	Description		
Switches				
S401	40T10876W02	Tact SKHLAJ (DX/LOUD)		
S402	40T10876W02	Tact SKHLAJ (EJECT)		
S403	40T10876W02	Tact SKHLAJ (TUNER/BAND)		
S404	40T10876W02	Tact SKHLAJ (TAPE)		
S405	40T10876W02	Tact SKHLAJ (AP1)		
S406	40T10876W02	Tact SKHLAJ (T.INFO)		
S407	40T10876W02	Tact SKHLAJ (TIME)		
S408	40T10876W02	Tact SKHLAJ (SEEK/TUNE)		
S409	40T10876W02	Tact SKHLAJ (UP/FF)		
S410	40T10876W02	Tact SKHLAJ (DN/REW)		
S411	40T10876W02	Tact SKHLAJ (DL.B/M1)		
S412	40T10876W02	Tact SKHLAJ (MS/M3)		
S413	40T10876W02	Tact SKHLAJ (B.SKIP/M5)		
S414	40T10876W02	Tact SKHLAJ (DL.C/M2)		
S415	40T10876W02	Tact SKHLAJ (SCAN/M4)		
S416	40T10876W02	Tact SKHLAJ (R.EJECT/M6)		
Pre-Amp P.C.Board				
IC				
IC101	51T64606F01	TA7705F		
Transistor				
Q101	48T62967F02	CP., DTC114E		
Diode				
D101	48T68828F01	1SS133		
Capacitors				
C101	08T74631F07	PP 180pF		
C102	08T74631F07	PP 180pF		
C103	08T74631F07	PP 180pF		
C104	08T74631F07	PP 180pF		
C105	23T61512F04	ELY.. 100 μF/6.3V		
C106	23T61512F04	ELY.. 100 μF/6.3V		
C107	23S57007F09	ELY.. 10μF/16V		
C108	08T52448F38	PP 0.011μF		
C109	08T52448F38	PP 0.011μF		
C110	23S61524F18	ELY.. 4.7μF/25V		

Symbol No.	Part No.	Description		
C111	23T00134L32	ELY.. 100μF/16V		
C112	08S53332F51	CP.. 0.022μF		
C113	08S53332F29	CP.. 330pF		
C114	08S53332F57	CP.. 0.1 μF		
Resistors				
R101	06S53330F97	CP.. 68K ohm 1/8W		
R102	06S53330F97	CP.. 68K ohm 1/8W		
R103	06S53330F97	CP.. 68K ohm 1/8W		
R104	06S53330F97	CP.. 68K ohm 1/8W		
R105	06S53330F37	CP.. 220 ohm 1/8W		
R106	06S53330F37	CP.. 220 ohm 1/8W		
R107	06S53331F14	CP.. 330K ohm 1/8W		
R108	06S53331F14	CP.. 330K ohm 1/8W		
R109	06S53330F79	CP.. 12K ohm 1/8W		
R110	06S53330F79	CP.. 12K ohm 1/8W		
R111	06S53330F80	CP.. 13K ohm 1/8W		
R112	06S53330F80	CP.. 13K ohm 1/8W		
R113	06S53330F85	CP.. 22K ohm 1/8W		
R114	06S53330F81	CP.. 15K ohm 1/8W		
R115	06S53330F81	CP.. 15K ohm 1/8W		
R116	06S53330F29	CP.. 100 ohm 1/8W		
R117	06S53330F89	CP.. 33K ohm 1/8W		
R118	06S53330F85	CP.. 22K ohm 1/8W		
R119	06S53330F85	CP.. 22K ohm 1/8W		
Level Control P.C.Board				
Transistor				
Q205	48T73888F08	CP., FMG1		
Resistors				
R250	06S64995F67	CP.. 3.9K ohm 1/16W		
R251	06S64995F67	CP.. 3.9K ohm 1/16W		
GZ Control P.C. Board				
IC's				
IC501	51T71799F01	71799F01		
IC502	51T71802F01	71802F01		

Symbol No.	Part No.	Description		
Transistors				
Q501	48T52547F02	2SB793A		
Q502	48T62967F03	CP.. DTC124K		
Diodes				
D501	48T52445F01	CP.. MA151WA		
D502	48T52446F01	CP.. MA151WK		
ZD501	48T68697F54	Zener, HZS16EB1		
ZD502	48T62934F29	CP.. Zener, RD6.8MB3		
Capacitors				
C501	23T82482F02	ELY.. 100μF/16V		
C502	23S61523F12	ELY.. 10μF/16V		
C503	08T50579F09	TF.. 0.047μF		
C504	23S61523F15	ELY.. 47μF/16V		
C505	08S53332F53	CP.. 0.033μF		
C506	08S53332F47	CP.. 0.01μF		
C507	08S53332F57	CP.. 0.1μF		
C508	08S53332F35	CP.. 1000pF		
C509	21C45322G28	CER.. 1000pF		
Resistors				
R501	06S81094F09	MF.. 4.7 ohm 1/2W		
R502	06S81094F65	MF.. 1K ohm 1/2W		
R503	06S53330F77	CP.. 10K ohm 1/8W		
R504	06S81094F05	MF.. 3.3 ohm 1/2W		
R506	06S53330F77	CP.. 10K ohm 1/8W		
R508	06S64995F94	CP.. 51K ohm 1/16W		
R509	06S53330F85	CP.. 22K ohm 1/8W		
R510	06S53330F71	CP.. 5.6K ohm 1/8W		
R511	06S53330F29	CP.. 100 ohm 1/8W		
R512	06S53331F12	CP.. 270K ohm 1/8W		
R513	06S53331F31	CP.. 2.7M ohm 1/8W		
Reverse P.C. Board				
Transistors				
PT501	51T63433F01	Sensor. Photo		
PT502	51T63433F01	Sensor. Photo		

Symbol No.	Part No.	Description		
Miscellaneous				
BA801	60T15855W01	Battery Lithium CR2450-HW1		
BA802	60T15855W02	Battery Lithium CR2450-VE1		
E801	01T94806F04	ASSY..Connector QRB B(28P)		
HD101	88T73824F01	Head Playback		
LCD401	65T15326W01	LCD, LU1505		
M501	01V71800F20	Assy.. Motor		
M502	01V83500F82	Assy.. RF Motor		
S501	40T52216F01	Switch, Micro (Pack In)		
S502	40T60329F02	Switch, Leaf (Eject)		
S504	40T63432F01	Switch, Slide (For/Rev.)		
S505	40T71025F03	Switch, Detector (Position)		
S506	40T71025F03	Switch, Detector (Metal)		
SD501	01A63213F01	Assy.. Program Solenoid		
SD502	01A63215F01	Assy.. Eject Solenoid		
SD503	01A63212F01	Assy.. Play Solenoid		
SD504	01A63214F01	Assy.. RF Solenoid		
ZD101	48T40150U58	Diode, ZEN.. HZ11C-1		

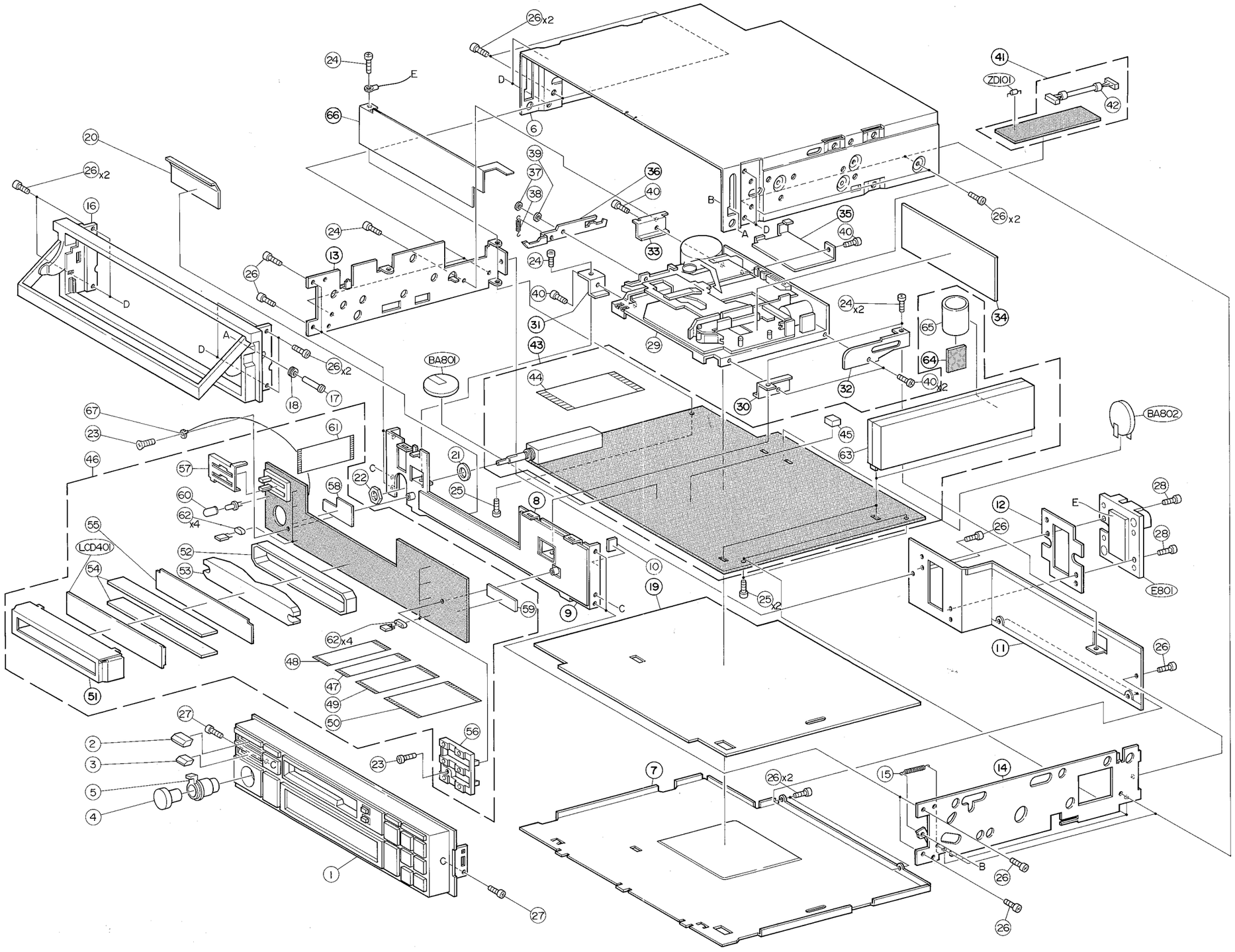
Cabinet Assembly Parts List

Note : The parts without part numbers are not supplied.

Symbol No.	IN-dex	Part No.	Description		
1	5-C	13C12257W01	Nose, Piece Assy		
2	5-A	36B94116F01	Knob, Slide		
3	5-A	36B94116F02	Knob, Slide		
4	5-A	36A94114F01	Knob, Control (Front)		
5	5-A	36A94115F01	Knob, Control (Back)		
6	1-D	15D82167F11	Cover, Top		
10	4-D	14S81481F94	Insulator, Cover		
15	5-E	41A84825F01	Spring,Bracket,Switch		
16	2-A	07C10065W01	Bracket, Handle Assy		
17	3-C	46A90021F01	Stud, Pin.		
18	3-B	46A94999F01	Stud, Ring		
20	2-A	07A13903W01	Bracket, Shield IC		
21	3-C	04A43020G03	Washer, Flat (M9.2)		
22	3-C	02S40000G20	Nut.. Hex (M9)		
23		03S44205G13	Screw, Countersink (M2.6x6)		
24		03S44205G07	Screw, Pan (M2.6x5)		
25		03S44205G48	Screw, Pan (M2.6x5)		
26		03S44205G34	Screw, Pan (M2.6x5)		
27		03S44205G41	Screw, Pan (M2.6x4)		
28	3-G	03S44205G76	Screw, Pan (M2.6x8)		
29	3-D	01V83200F59	Cassette Deck(GZ75E230)		
37	2-D	04A41345P04	Washer, Lock (M2.6)		
38	2-D	41A84062F01	Spring, Lever		
39	2-D	04A65640F07	Washer, Fiber (M3.2)		
40		03S44205G30	Screw, Pan (M2.6x4)		
42	1-F	01T84387F01	Assy.,Shield Wire Occ		
44	3-D	01T84793F01	Flat, Cable 18P		
45	3-E	75S72374F82	Cushion, Rubber		
46	3-A	01V14500W97	Assy., Front P.C. Board		
47	4-C	30T15856W01	Wire, Parallel 4P		
48	4-B	30T15856W02	Wire, Parallel 5P		
49	4-C	30T15856W03	Wire, Parallel 6P		
50	4-C	30T15856W04	Wire, Parallel 10P		
52	4-B	15A12269W01	Case, LCD		
53	4-B	61A12270W01	Lens, LCD		
54	4-A	75T16097W01	Rubber, Electric		
55	3-A	26A12271W01	Refrector, Sheet		
56	4-C	15B12392W01	Cover, LED		
57	3-B	07A94609F01	Bracket, Shield		
58	3-C	14A13916W01	Insulator, Cover		
59	4-D	14S94461F66	Insulator, Cover		
60	3-B	43B41728U10	Bush, Lamp		
61	3-C	01T95071F01	Assy., Card Wire 12P		
62		43A13227W01	Spacer, LED		
63	3-E	77C94290F01	FM/MW/LW Tuner (FE001) MB4E701B		

Symbol No.	IN-dex	Part No.	Description		
65	2-F	37T43734F03	Sumi Tube		
67	3-A	01T95113F01	Lug, Wire		

Exploded View (Cabinet)



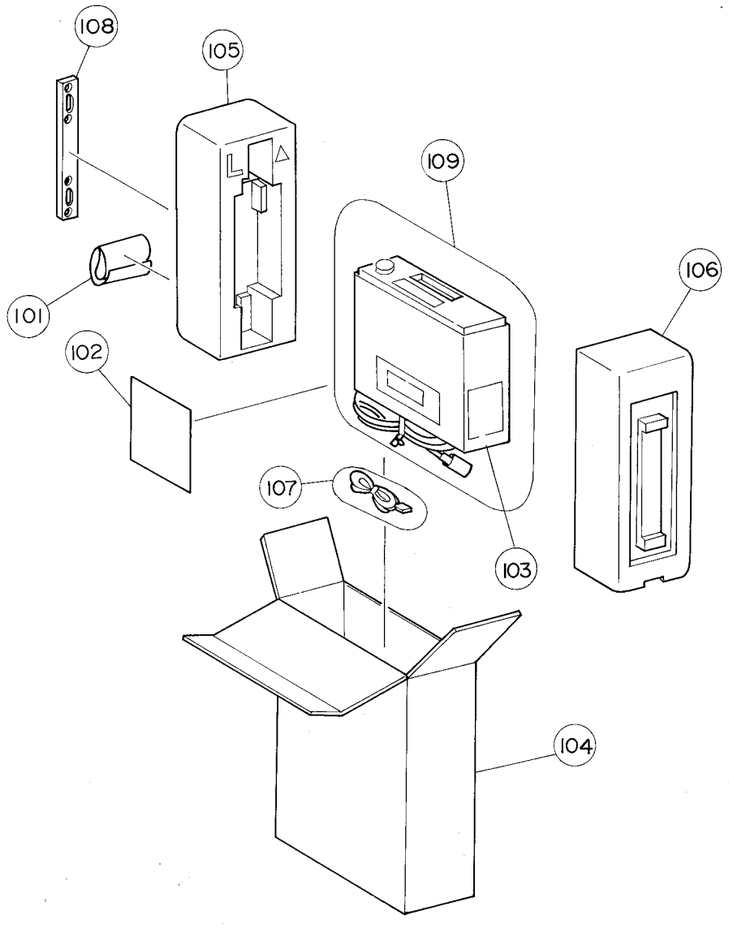
Packing Assembly Parts List

Note : The parts without part numbers are not supplied.

Symbol No.	Part No.	Description		
101	01V14500W99	Assy., Kit		
101-1	02B47353F01	NUT, Hex(M5)		
101-2	03S40012G86	Screw, Tapping(M5X20)		
101-3	03B44963F03	Bolt Hex W/Washer (M5x10)		
101-4	03A40155F05	Bolt Hex(M5x14)		
101-5	03A40155F01	Bolt Hex(M5x8)		
101-6	03A84814F01	Screw, Bind(M2.6x22)		
101-7	43A58272F04	Spacer		
101-8	45A41684U01	ARM, Adapter		
102	68P10790W68	Owners, Manual		

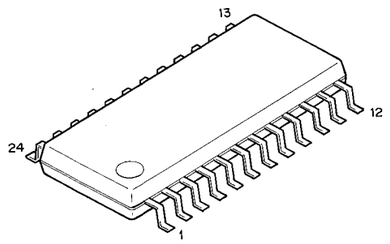
Symbol No.	Part No.	Description		
103	01V14600W02	Assy., Case Mother		
103-1	15D94518F01	Case, Mother		
103-2	01T94805F04	Assy., Connector QRB(18P)		
103-3	03S44205G61	Screw, Pan(M2.6x10)		
103-4	03S44205G07	Screw, Pan(M2.6x5)		
104	56S96421F91	Carton, Packing(IND)		
105	56D82187F01	Tray, Packing(L)		
106	56D82187F02	Tray, Packing(R)		
107	01T96095F01	Assy, Connector 4P		
108	07B64552F01	Bracket, Strap Receiver		
109	56B40990T36	Sack, Poly		

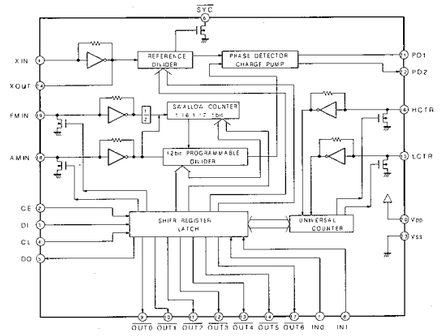
Packing Method View



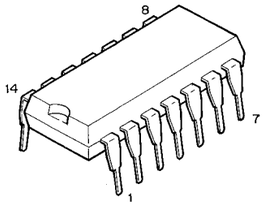
Semi-Conductor Lead Identifications

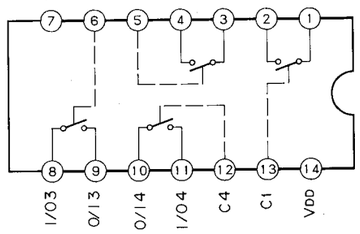
LC7218M : IC001



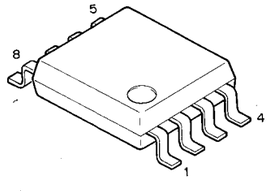


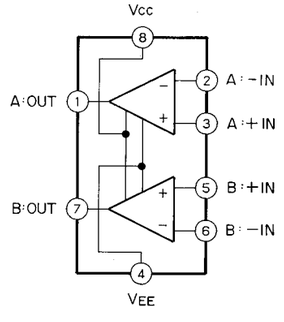
BU4066BF : IC002



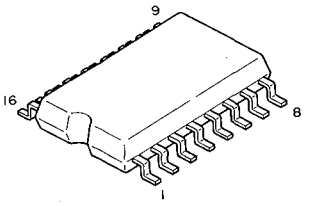


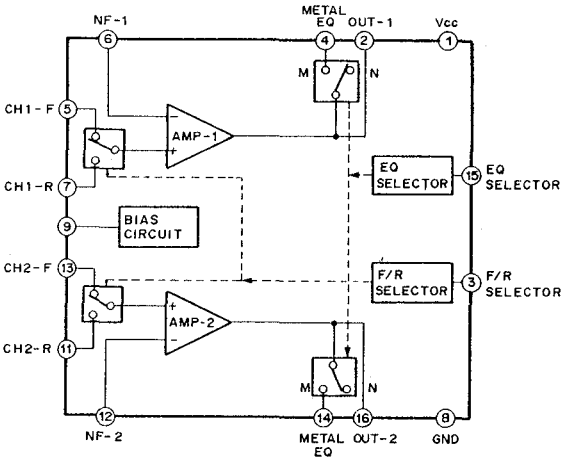
NJM4558M : IC003, 604, 610
NJM4560M : IC301, 801
NJM5532M : IC302



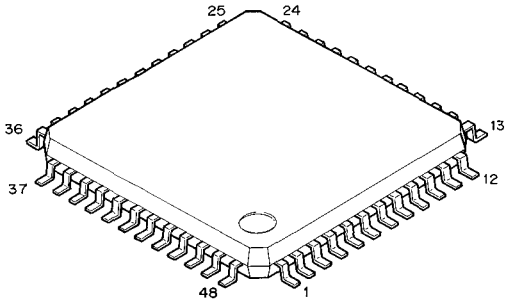


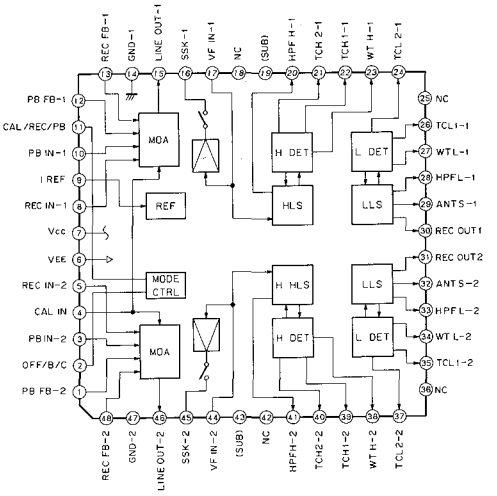
TA7705F : IC101



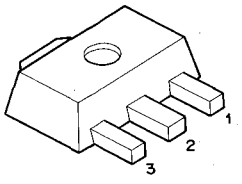


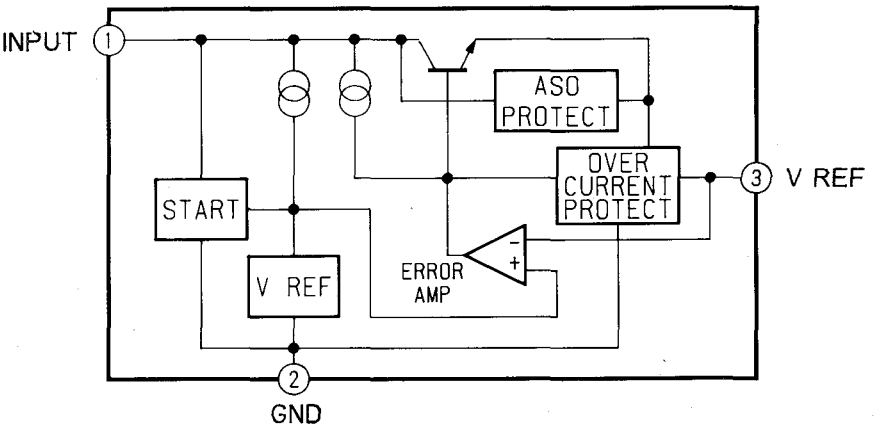
CXA1098Q : IC202



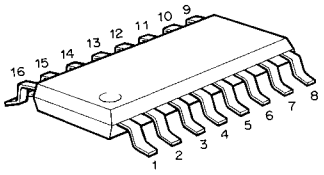


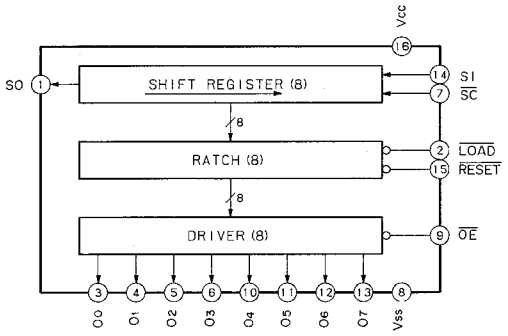
M5236ML : IC303



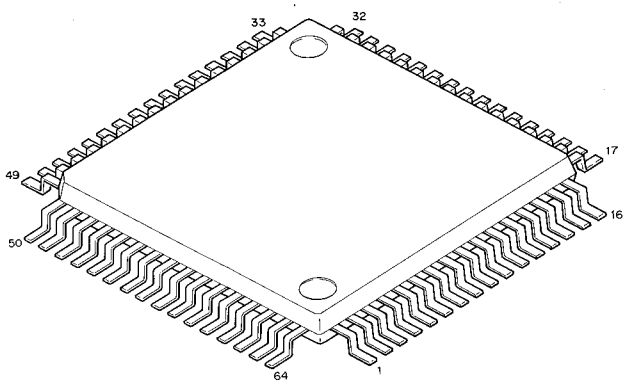


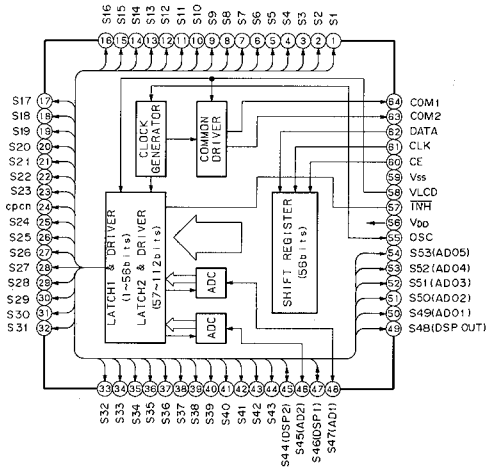
MB88306 : IC401, 601, 603



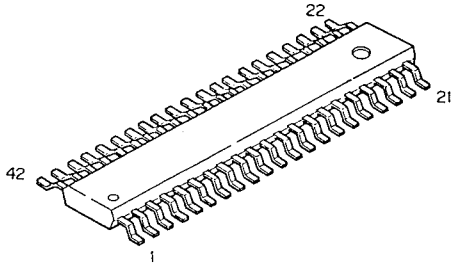


LC7582 : IC402, 403



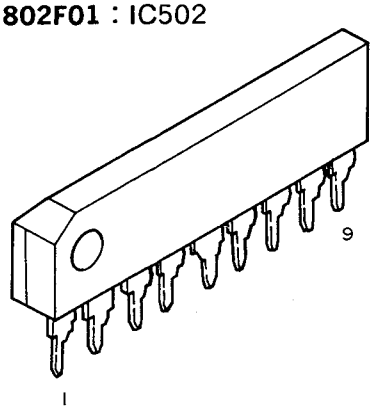


71799F01 : IC501



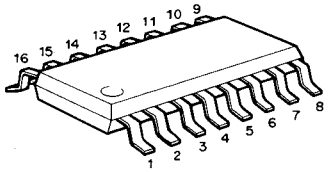
1	Vcc2	15	PROG	29	RUN DET
2	O-PLAY	16	MS	30	FF
3	O-PROG	17	EJECT	31	REW
4	P.GND	18	AUTO CUE	32	O.MS.FAST
5	P.GND	19	BI	33	O.MUTE
6	P.GND	20	ARE	34	RFM CONT
7	P.GND	21	KEY OFF	35	P.GND
8	P.GND	22	POSITION SW	36	P.GND
9	O-FAST	23	PACK IN	37	P.GND
10	O-MS	24	OSC	38	P.GND
11	ARE-IND	25	Vcc1	39	P.GND
12	O-MOTOR	26	L.GND	40	O-EJECT
13	RF.SW	27	F/R	41	RMF1
14	PLAY	28	PACK DOWN	42	RMF2

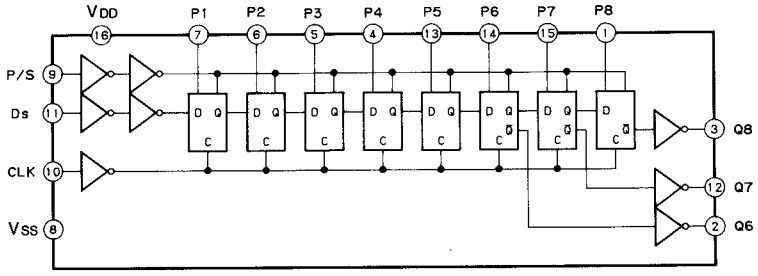
71802F01 : IC502



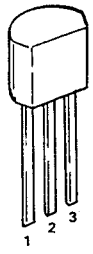
1	OSC
2	INDEX
3	DC COUPL
4	MSF
5	GND
6	0.AUTO CUE
7	$\overline{MB}$
8	Vcc
9	AUDIO IN

BU4021BF : IC602

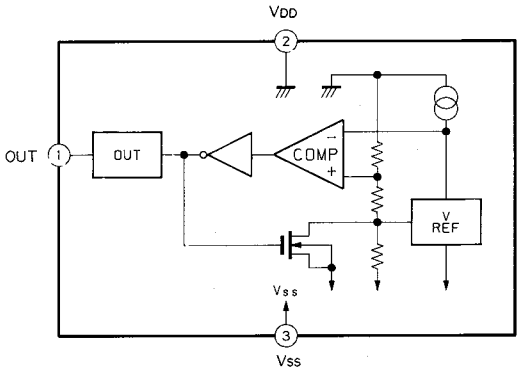




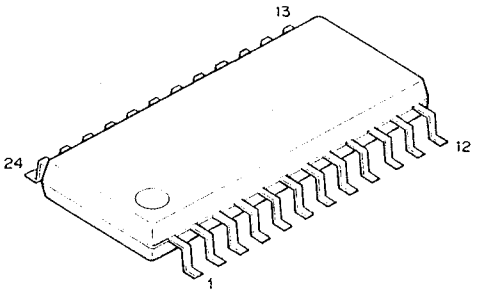
S-8052ALR : IC606

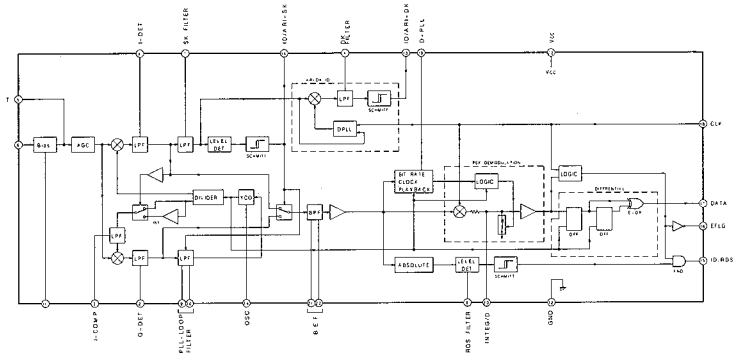


1. OUT
2. V_{DD}
3. V_{SS}

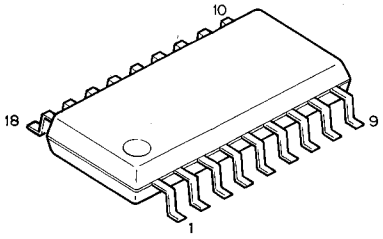


LA2231M : IC607



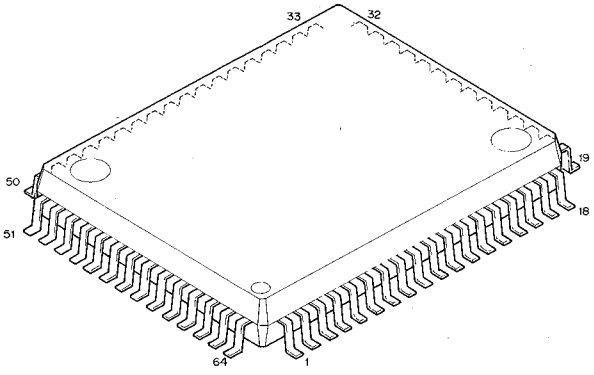


15851W02 : IC608



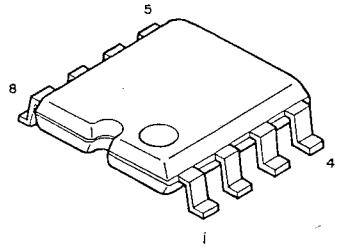
1	OSC1	10	NC
2	GND	11	GND
3	GND	12	NC
4	RES	13	NC
5	CLOCK-IN	14	DATA-START
6	DATA-IN	15	DATA-OUT
7	CORR.SEL	16	CLOCK-OUT
8	CL.ED.SEL	17	GND
9	Vcc	18	OSC2

15593W01 : IC609



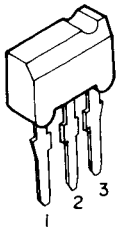
1	IN1	17		33	POW.ON.RESET	49	CLOCK
2	S.METER	18	S1	34	DO	50	CE
3	ALARM	19	GND	35	$\overline{LOAD}$	51	$\overline{INH}$
4	CS	20	$\overline{RESET}$	36	S1	52	DO
5	CE	21	X IN	37	$\overline{SC}$	53	MUTE
6	D1	22	X OUT	38	P10	54	SK CLK
7	CL	23	XC IN	39	P7	55	AVcc
8	CLK	24	XC OUT	40	P6	56	Vcc
9	DATA	25	Vss	41	P5	57	AVss
10	D/S	26	NC	42	P4	58	V.REF
11	Q8	27	$\overline{SK}$	43	P3	59	POWER
12	P/S	28	$\overline{DK}$	44	P2	60	D1
13	CLK	29	SD	45	P1	61	IGN
14	LPF SW	30	$\overline{ST}$	46	P0	62	IN PAUSE
15	$\overline{SC}$	31	RDS	47	DATA-1	63	IN3
16	$\overline{LOAD}$	32		48	DATA-2	64	IN2

12495W02 : IC611

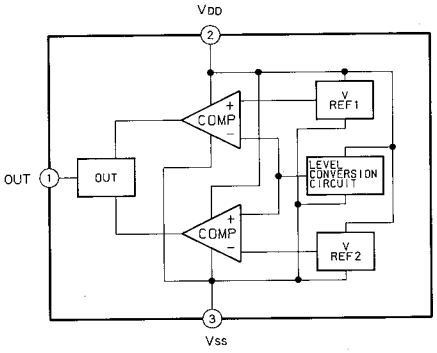


1	NC
2	Vcc
3	CS
4	SK
5	D1
6	D0
7	GND
8	NC

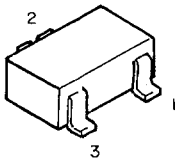
MN1280 : IC612



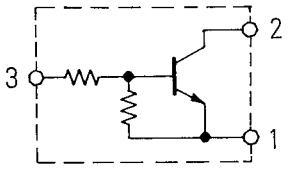
1. OUT
2. V_{DD}
3. V_{SS}



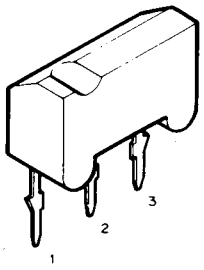
DTC124EU : Q201, 202, 203, 204, 616, 617, 630
DTC114E : Q001, 010, 101
DTC124E : Q004, 006, 012, 013, 601, 602, 603, 604, 611, 614, 615, 631, 803, 806, 808 810, 811, 813
DTC124K : Q502



1. Emitter
2. Collector
3. Base

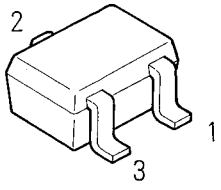


2SD661 : Q002, 003
2SD636 : Q005, 007, 014, 802
2SD973A : Q008, 610, 801
2SB644 : Q009, 011, 307
2SD1330 : Q305, 306
2SB793A : Q812, 501
2SD601A : Q015

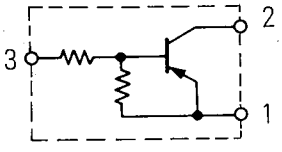


1. Emitter
2. Collector
3. Base

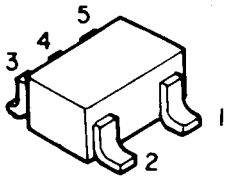
DTA124E : Q614



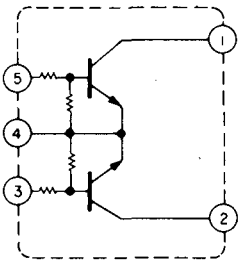
1. Emitter
2. Collector
3. Base



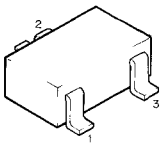
FMG1 : Q301, 401, 205



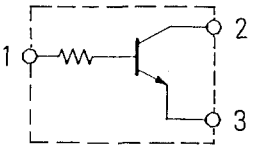
1. Collector
2. Collector
3. Base
4. Emitter
5. Base



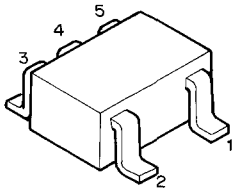
DTC124TK : Q606
DTC114TU : Q618, 619, 620
DTC343T : Q303, 304, 309, 310, 607, 608



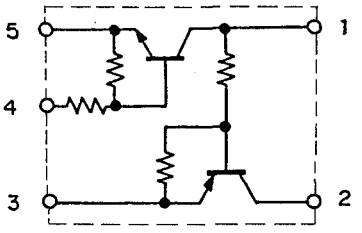
1. Base
2. Collector
3. Emitter



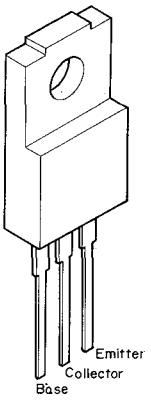
FMC3 : Q612, 632



1. IN
2. OUT
3. GND
4. IN
5. GND

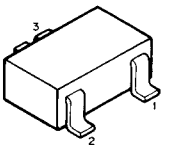


2SD1266 : Q804



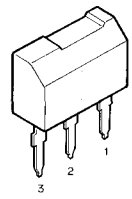
1. Base
2. Collector
3. Emitter

2SA1576 : Q805



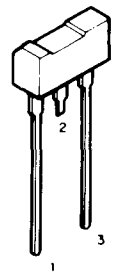
1. Emitter
2. Base
3. Collector

2SB911M : Q807

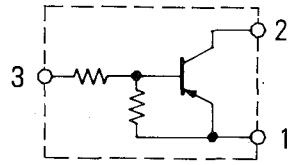


1. Emitter
2. Collector
3. Base

DTA124EL : Q809



1. Emitter
2. Collector
3. Base



ALPINE ELECTRONICS INC.
Tokyo Office: 1-1-8 Nishi Gotanda,
Shinagawa-ku, Tokyo, Japan 141
Phone 03-494-1101, Telex 8927-61

ALPINE ELECTRONICS OF AMERICA, INC.
19145 Gramercy Place
Torrance, California 90501
Phone 213-326-8000

ALPINE ELECTRONICS OF CANADA, INC.
605 Alden RD. Markham,
Ontario L3R 3L5 Canada
Phone 416-475-7280 Telex 06-986789

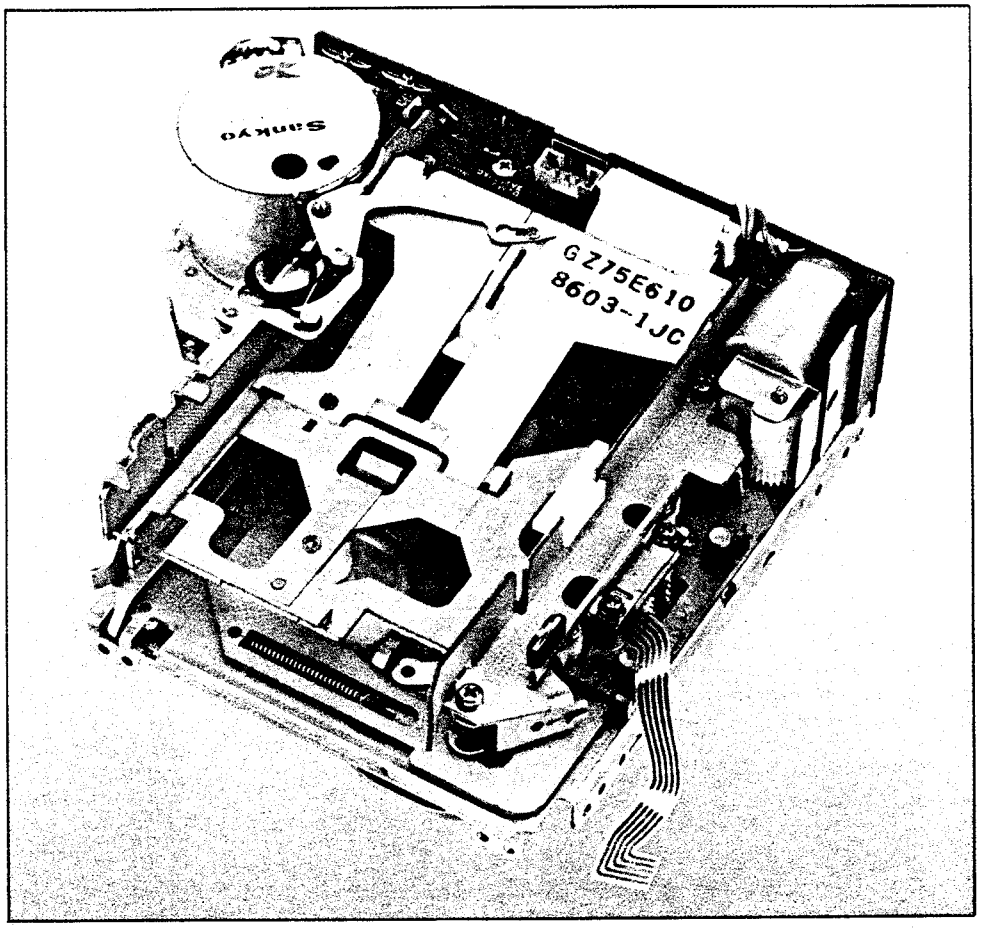
ALPINE ELECTRONICS GmbH
Münsterstr, 330 D-4000 Düsseldorf
F.R. Germany
Tel. 0211-626806 Telex 8588 296 ALPI D

6/89-Y
68P20524W02
Printed in Japan

ALPINE SERVICE MANUAL

Exploded View & Parts List For Cassette Deck Mechanism

ADDENDUM & REVISED



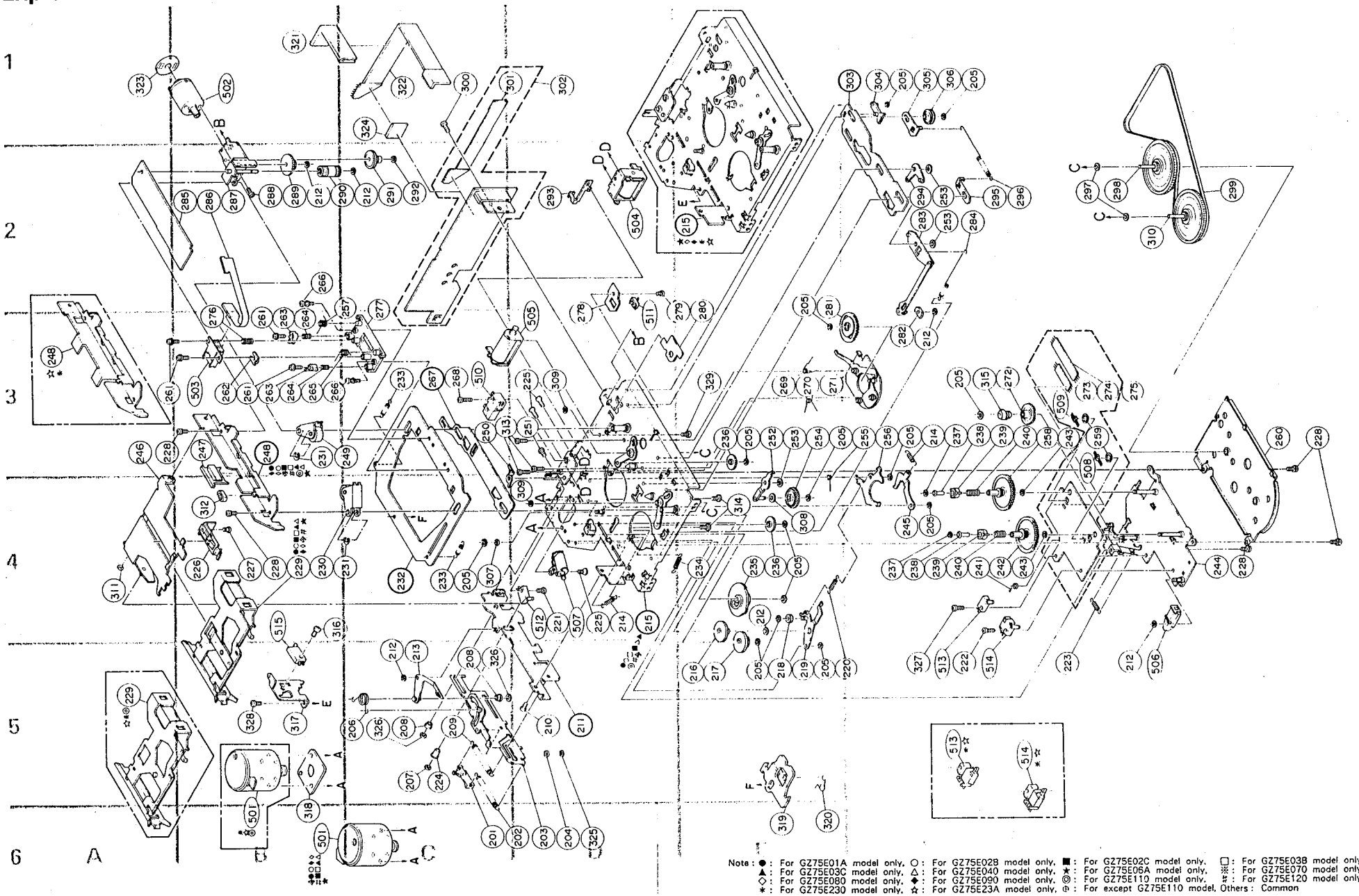
GZ SERIES

17

Contents

Exploded View (Cassette Deck) . . . . . 3 to 4
Parts List . . . . . 5 to 12
Mechanical Parts Replacement . . . . . 13 to 19

Exploded View (Cassette Deck)



Note : ●: For GZ75E01A model only, ○: For GZ75E02B model only, ■: For GZ75E02C model only, □: For GZ75E03B model only,
▲: For GZ75E03C model only, △: For GZ75E040 model only, ★: For GZ75E06A model only, ※: For GZ75E070 model only,
◇: For GZ75E080 model only, ◆: For GZ75E090 model only, ◎: For GZ75E110 model only, ⋕: For GZ75E120 model only,
✱: For GZ75E230 model only, ☆: For GZ75E23A model only, ⊕: For except GZ75E110 model, Others: Common

Parts List

NOTE : The parts without part number are not supplied.

Symbol No.		Index	Part No.	Description		
	201	6-C	44A63208F01	Rack		
	202	6-D	41B63283F02	Spring		
●	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
○	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
■	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
□	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
▲	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
△	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
★	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
※	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
◇	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
◆	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
◎	203	6-D	01A71701F01	Assy., Eject Lever Rivet		
#	203	6-D	01A63490F01	Assy., Eject Lever Rivet		
*	203	6-D	01A71701F02	Assy., Eject Lever Rivet		
☆	203	6-D	01A71701F02	Assy., Eject Lever Rivet		
	204	6-D	43A64073F01	Roller, Eject (C)		
	205		04A41345P01	Washer, Lock (M1.2)		
	206	5-C	41A63284F01	Spring, Turn Eject		
	207	5-C	04A41345P15	Washer, Lock (M1.2)		
	208	5-C	43A63282F01	Roller, Eject Arm		
	209	5-C	41B63283F01	Spring		
⊕	210	5-D	03S56479F08	Screw, Pan (M1.7 × 2)		
◎	210	5-D	03S68259F11	Screw, Pan (M1.7 × 2)		
	212		04A41345P01	Washer, Lock (M1.7)		
	213	4-C	01A63489F01	Assy., Eject Arm Rivet		
	214		41B63283F05	Spring		
	216	5-E	44A63189F01	Gear, Motor Idler		
	217	5-E	44A63190F01	Gear, Eject Idler		
	218	5-E	44A63191F01	Gear, Clutch		

Symbol No.		Index	Part No.	Description		
	219	5-E	01A63497F01	Assy., Clutch Lever Rivet		
	220	5-F	41B63283F08	Spring		
⊕	221	4-D	03S56479F09	Screw, Pan (M1.7 × 6)		
◎	221	4-D	03S68259F04	Screw, Pan (M1.7 × 6)		
●	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
○	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
■	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
□	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
▲	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
△	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
※	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
◇	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
◆	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
◎	222	5-F	03S68259F03	Screw, Pan (M2 × 7)		
#	222	5-F	03S56479F04	Screw, Pan (M2 × 7)		
*	222	5-F	03S68259F09	Screw, Pan (M2×6)		
☆	222	5-F	03S68259F09	Screw, Pan (M2×6)		
	223	5-G	41B63283F07	Spring		
	224	5-C	43A63281F01	Roller, Plate Base		
⊕	225		03S56479F07	Screw, Countersink (M2.6 × 3)		
◎	225		03S68259F13	Screw, Countersink (M2.6 × 3)		
●	226	4-B	45B63199F01	Slider		
○	226	4-B	45B63199F01	Slider		
■	226	4-B	45B63199F01	Slider		
□	226	4-B	45B63199F01	Slider		
▲	226	4-B	45B63199F01	Slider		
△	226	4-B	45B63199F01	Slider		
★	226	4-B	45B63199F01	Slider		
※	226	4-B	45B63199F01	Slider		
◇	226	4-B	45B63199F01	Slider		
◆	226	4-B	45B63199F01	Slider		
◎	226	4-B	45B71985F01	Slider		
#	226	4-B	45B63199F01	Slider		
*	226	4-B	45B82846F01	Slider		
☆	226	4-B	45B82846F01	Slider		

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

NOTE : The parts without part number are not supplied.

Symbol No.		Index	Part No.	Description
	227	4-B	47A63278F01	Shaft, Slider
	228		03D40014G12	Screw, W/Washer (M2.6 × 4)
●	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
○	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
■	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
□	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
▲	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
△	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
★	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
※	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
◇	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
◆	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
◎	229	5-A	07C63151F01	Holder, Cassette
#	229	4-B	01A63494F01	Assy., Cassette Holder Rivet
*	229	5-A	07C63151F01	Holder, Cassette
☆	229	5-A	07C63151F01	Holder, Cassette
⊕	230	4-B	01V69200F02	Assy., Pinch Roller
◎	230	4-B	01V73600F68	Assy., Pinch Roller
	231		04C42091G04	Ring, "E" (M3)
	233		41B63283F03	Spring
	234	4-E	41B63283F04	Spring
	235	4-E	01V68400F39	Assy., Pause Gear
	236		44A63196F01	Gear, Take-up
	237		04A41345P12	Washer, Lock (M1.7)
	238		49A64627F01	Cap, Reel
	239		49A64626F01	Ring, Reel
	240		41A64628F01	Spring, Reel
	241	4-F	41A66291F01	Spring, Eject Lock
	242	4-F	01T72396F01	Assy., Reel
	243		04S40075G06	Washer, Polyslider (M2.1)
●	244	4-H	01A63495F01	Bracket, Reel
○	244	4-H	01A63495F01	Bracket, Reel
■	244	4-H	01A63495F01	Bracket, Reel
□	244	4-H	01A63495F01	Bracket, Reel
▲	244	4-H	01A63495F01	Bracket, Reel
△	244	4-H	01A63495F01	Bracket, Reel
★	244	4-H	01A63495F01	Bracket, Reel
※	244	4-H	01A63495F01	Bracket, Reel
◇	244	4-H	01A63495F01	Bracket, Reel
◆	244	4-H	01A63495F01	Bracket, Reel

Symbol No.		Index	Part No.	Description
◎	244	4-H	01A63495F01	Bracket, Reel
#	244	4-H	01A63495F01	Bracket, Reel
*	244	4-H	01A63495F04	Bracket, Reel
☆	244	4-H	01A63495F04	Bracket, Reel
	245	4-F	45A63173F01	Lever, Play Lock
●	246	3-A	01A63491F01	Assy., Plate Base Rivet
○	246	3-A	01A63491F01	Assy., Plate Base Rivet
■	246	3-A	01A63491F01	Assy., Plate Base Rivet
□	246	3-A	01A63491F01	Assy., Plate Base Rivet
▲	246	3-A	01A63491F01	Assy., Plate Base Rivet
△	246	3-A	01A63491F01	Assy., Plate Base Rivet
★	246	3-A	01A63491F01	Assy., Plate Base Rivet
※	246	3-A	01A63491F01	Assy., Plate Base Rivet
◇	246	3-A	01A63491F01	Assy., Plate Base Rivet
◆	246	3-A	01A63491F01	Assy., Plate Base Rivet
◎	246	3-A	01A63491F01	Assy., Plate Base Rivet
#	246	3-A	01A63491F01	Assy., Plate Base Rivet
*	246	3-A	01A82275F02	Assy., Plate Base Rivet
☆	246	3-A	01A82275F02	Assy., Plate Base Rivet
●	247	3-B	07A63203F01	Holder, Guide
○	247	3-B	07A63203F01	Holder, Guide
■	247	3-B	07A63203F01	Holder, Guide
□	247	3-B	07A63203F01	Holder, Guide
▲	247	3-B	07A63203F01	Holder, Guide
△	247	3-B	07A63203F01	Holder, Guide
★	247	3-B	07A63203F01	Holder, Guide
※	247	3-B	07A63203F01	Holder, Guide
◇	247	3-B	07A63203F01	Holder, Guide
◆	247	3-B	07A63203F01	Holder, Guide
◎	247	3-B	07A63203F01	Holder, Guide
#	247	3-B	07A63203F01	Holder, Guide
⊕	249	3-C	01V69200F03	Assy., Pinch Roller
◎	249	3-C	01V73600F70	Assy., Pinch Roller
	250	3-C	45A63178F01	Lever, Micro Switch
	251	3-D	03S44205G30	Screw, Pan (M2.6 × 4)

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

NOTE : The parts without part number are not supplied.

Symbol No.	Index	Part No.	Description
● 252	3-E	01A63483F01	Assy., RF Idler Rivet
○ 252	3-E	01A63483F01	Assy., RF Idler Rivet
■ 252	3-E	01A63483F01	Assy., RF Idler Rivet
□ 252	3-E	01A63483F01	Assy., RF Idler Rivet
▲ 252	3-E	01A63483F01	Assy., RF Idler Rivet
△ 252	3-E	01A63483F01	Assy., RF Idler Rivet
★ 252	3-E	01A63483F01	Assy., RF Idler Rivet
※ 252	3-E	01A63483F01	Assy., RF Idler Rivet
◇ 252	3-E	01A63483F01	Assy., RF Idler Rivet
◆ 252	3-E	01A63483F01	Assy., RF Idler Rivet
◎ 252	3-E	01A63483F01	Assy., RF Idler Rivet
# 252	3-E	01A63483F01	Assy., RF Idler Rivet
* 252	3-E	01A63483F02	Assy., RF Idler Rivet
☆ 252	3-E	01A63483F02	Assy., RF Idler Rivet
253		04A41345P04	Washer, Lock (M2.6)
254	3-E	44A63197F01	Gear, RF Idler
255	3-F	41A63285F01	Spring, Play Act
256	3-F	45A63179F01	Lever, Play Solenoid
257	2-C	41A63286F01	Spring, Pinch Roller
258	3-G	01T72396F02	Assy., Reel
259	3-G	04S40075G17	Washer, Polyslider (M4.1)
⊕ 260	3-H	01V64100F95	Assy., Flywheel Bracket
◎ 260	3-H	01V71800F19	Assy., Flywheel Bracket
261	3-B	03S40019G03	Screw, F Lock (M2 × 4)
262	3-B	43A44456F06	Spacer, Head
263	3-B	43B63198F01	Guide, Tape
264	3-B	41A63290F01	Spring, Tape Guide
265	3-B	41A63286F02	Spring, Pinch Roller
● 266		03S68259F01	Screw, Flat (M2.6 × 3)
○ 266		03S68259F01	Screw, Flat (M2.6 × 3)
■ 266		03S68259F01	Screw, Flat (M2.6 × 3)
□ 266		03S68259F01	Screw, Flat (M2.6 × 3)
▲ 266		03S68259F01	Screw, Flat (M2.6 × 3)
△ 266		03S68259F01	Screw, Flat (M2.6 × 3)
★ 266		03S68259F01	Screw, Flat (M2.6 × 3)
※ 266		03S68259F01	Screw, Flat (M2.6 × 3)
◇ 266		03S68259F01	Screw, Flat (M2.6 × 3)
◆ 266		03S68259F01	Screw, Flat (M2.6 × 3)
◎ 266		03S68259F01	Screw, Flat (M2.6 × 3)
# 266		03S68259F01	Screw, Flat (M2.6 × 3)
* 266		03S68259F04	Screw, Pan (M2.6 × 4.5)
☆ 266		03S68259F04	Screw, Pan (M2.6 × 4.5)
⊕ 268	3-C	03S56479F02	Screw, Bind (M2.3 × 8)
◎ 268	3-C	03S68259F06	Screw, Bind (M2.3 × 8)
269	3-E	41A63287F01	Spring, Reverse Lock
270	3-E	41A63288F01	Spring, Reverse Act
271	3-F	01A63496F01	Assy., Frame Reverse Rivet
272	3-G	44B63188F01	Gear, Eject
● 273	3-G	30T63478F02	Lead Wire
○ 273	3-G	30T63478F02	Lead Wire
■ 273	3-G	30T63478F02	Lead Wire
□ 273	3-G	30T63478F02	Lead Wire
▲ 273	3-G	30T63478F02	Lead Wire
△ 273	3-G	30T63478F02	Lead Wire
★ 273	3-G	30T63478F02	Lead Wire
※ 273	3-G	30T63478F02	Lead Wire
◇ 273	3-G	30T63478F02	Lead Wire
◆ 273	3-G	30T63478F02	Lead Wire
◎ 273	3-G	30T63478F02	Lead Wire
# 273	3-G	30T63478F02	Lead Wire
* 273	3-G	30T63478F03	Lead Wire
☆ 273	3-G	30T63478F03	Lead Wire
274	3-G	30T63478F01	Lead Wire
● 275	3-G	01V64100F92	Assy., Reel P.C. Board
○ 275	3-G	01V64100F92	Assy., Reel P.C. Board

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

NOTE : The parts without part number are not supplied.

Symbol No.		Index	Part No.	Description
■	275	3-G	01V64100F92	Assy., Reel P.C. Board
□	275	3-G	01V64100F92	Assy., Reel P.C. Board
▲	275	3-G	01V64100F92	Assy., Reel P.C. Board
△	275	3-G	01V64100F92	Assy., Reel P.C. Board
★	275	3-G	01V64100F92	Assy., Reel P.C. Board
※	275	3-G	01V64100F92	Assy., Reel P.C. Board
◇	275	3-G	01V64100F92	Assy., Reel P.C. Board
◆	275	3-G	01V64100F92	Assy., Reel P.C. Board
◎	275	3-G	01V64100F92	Assy., Reel P.C. Board
#	275	3-G	01V64100F92	Assy., Reel P.C. Board
*	275	3-G	01V83600F37	Assy., Reel P.C. Board
☆	275	3-G	01V83600F37	Assy., Reel P.C. Board
	276	3-B	41A63289F01	Spring, Head
	277	2-C	07B63205F01	Frame, Head
	278	2-D	84A63235F01	Program Switch P.C. Board
	279	2-E	03S40011G58	Screw, Pan (M2.6×3)
	280	2-E	84A63234F01	R/F Switch P.C. Board (included RF)
	281	2-E	44B63187F01	Gear, Change
	282	3-F	76A63231F01	Chip
⊕	283	2-F	01A63485F01	Assy., RF Lock Rivet
◎	283	2-F	01A71958F01	Assy., RF Lock Rivet
	284	2-F	41B63283F09	Spring
●	285	2-B	01V73300F71	Assy., GZ Audio P.C. Board
■	285	2-B	01V73300F71	Assy., GZ Audio P.C. Board
▲	285	2-B	01V73700F53	Assy., GZ Audio P.C. Board
○	285	2-B	01V64600F91	Assy., GZ Audio P.C. Board
□	285	2-B	01V69100F14	Assy., GZ Audio P.C. Board
◆	285	2-B	01V69100F14	Assy., GZ Audio P.C. Board
★	285	2-B	01V81400F69	Assy., GZ Audio P.C. Board
◇	285	2-B	01V73800F11	Assy., GZ Audio P.C. Board
◎	285	2-B	01V73800F98	Assy., GZ Audio P.C. Board
	286	2-B	84T63477F01	Head/Flexible P.C. Board
	287	2-B	01A63492F01	Assy., RF Frame Rivet
⊕	288	2-B	03S52360F95	Screw, Pan (M2 × 2.5)
◎	288	2-B	03S52360F95	Screw, Pan (M2 × 2.5)
	289	2-B	44A63194F01	Gear, RF (B)
	290	2-C	44A63193F01	Gear, RF (A)
	291	2-C	01A63493F01	Assy., RF Gear Rivet
	292	2-C	04A41345P11	Washer, Lock (M1.2)
	293	2-D	45A63174F01	Lever, Solenoid Link
⊕	294	2-F	01A63484F01	Assy., RF Link Rivet
◎	294	2-F	45A71937F01	Assy., RF Link Rivet
	295	2-F	45A63176F01	Lever, RF Spring (B)
	296	2-G	41B63283F06	Spring
	297	2-G	04S40075G05	Washer, Polyslider (M2.1)
⊕	298	2-G	01T63210F02	Assy., Flywheel
◎	298	2-G	01T63210F03	Assy., Flywheel
	299	2-H	42A40969F01	Belt
	300	1-C	03S44205G42	Screw, Pan (M2.6 × 4)
●	301	1-D	30T68768F01	Lead Wire Parallel (9P)
○	301	1-D	30T68768F01	Lead Wire Parallel (9P)
■	301	1-D	30T68768F01	Lead Wire Parallel (9P)
★	301	1-D	30T68768F01	Lead Wire Parallel (9P)
◇	301	1-D	30T68768F01	Lead Wire Parallel (9P)
●	302	1-D	01V64100F98	Assy., GZ Control P.C. Board
○	302	1-D	01V68900F90	Assy., GZ Control P.C. Board
■	302	1-D	01V68900F90	Assy., GZ Control P.C. Board
□	302	1-D	01V69100F13	Assy., GZ Control P.C. Board
▲	302	1-D	01V69100F13	Assy., GZ Control P.C. Board
△	302	1-D	01V69100F13	Assy., GZ Control P.C. Board

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

NOTE : The parts without part number are not supplied.

Symbol No.		Index	Part No.	Description
★	302	1-D	01V73800F10	Assy., GZ Control P.C. Board
※	302	1-D	01V73200F86	Assy., GZ Control P.C. Board
◇	302	1-D	01V73800F10	Assy., GZ Control P.C. Board
◆	302	1-D	01V69100F13	Assy., GZ Control P.C. Board
◎	302	1-D	01V73800F37	Assy., GZ Control P.C. Board
#	302	1-D	01V69100F13	Assy., GZ Control P.C. Board
*	302	1-D	01V83200F67	Assy., GZ Control P.C. Board
☆	302	1-D	01V83200F67	Assy., GZ Control P.C. Board
	304	1-F	44A63207F01	Gear, RF Swing
	305	1-F	45A63175F01	Lever, RF Spring (A)
	306	1-F	49A63202F01	Pulley, Idler
	307	4-C	43A67287F01	Roller, Eject Guide
	308	4-E	04A41345P09	Washer, Lock (M2.3)
	309	3-D	43A44303P03	Washer, Oil Shield (M1.9)
⊕	310	2-G	01T63210F01	Assy., Flywheel
◎	310	2-G	01T63210F03	Assy., Flywheel
⊕	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
○	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
■	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
□	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
▲	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
△	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
★	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
※	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
◇	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
◆	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
#	311	4-A	04S40075G11	Washer, Polyslider (M3.1)
⊕	312	4-B	75A41807F01	Cushion, Rubber
○	312	4-B	75A41807F01	Cushion, Rubber
■	312	4-B	75A41807F01	Cushion, Rubber

Symbol No.		Index	Part No.	Description
□	312	4-B	75A41807F01	Cushion, Rubber
▲	312	4-B	75A41807F01	Cushion, Rubber
△	312	4-B	75A41807F01	Cushion, Rubber
★	312	4-B	75A41807F01	Cushion, Rubber
※	312	4-B	75A41807F01	Cushion, Rubber
◇	312	4-B	75A41807F01	Cushion, Rubber
◆	312	4-B	75A41807F01	Cushion, Rubber
◎	312	4-B	75A41807F01	Cushion, Rubber
#	312	4-B	75A41807F01	Cushion, Rubber
⊕	313	3-D	03A63557F01	Screw, Pan (M1.7 × 2)
◎	313	3-D	03S68259F11	Screw, Pan (M1.7×2)
⊕	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
○	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
■	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
□	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
▲	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
△	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
★	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
※	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
◇	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
◆	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
◎	314	4-E	03S68259F24	Screw, Pan (M2.6 × 4.5)
#	314	4-E	03S68259F21	Screw, Pan (M2.6 × 2.5)
*	314	4-E	03S56479F07	Screw, Countersink (M2.6×3)
☆	314	4-E	03S56479F07	Screw, Countersink (M2.6×3)
	315	3-F	44B70362F01	Gear, Eject
★	316	4-C	03S68259F04	Screw, Pan (M1.7 × 6)
◇	316	4-C	03S68259F04	Screw, Pan (M1.7 × 6)
◆	316	4-C	03S68259F04	Screw, Pan (M1.7 × 6)
★	317	5-B	07A72995F01	Plate, Eject Switch
◇	317	5-B	07A72995F01	Plate, Eject Switch
◆	317	5-B	07A72995F01	Plate, Eject Switch
◎	318	6-B	43A72151F01	Spacer, Motor
*	318	6-B	43A72151F01	Spacer, Motor
☆	318	6-B	43A72151F01	Spacer, Motor

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

NOTE : The parts without part number are not supplied.

Symbol No.	Index	Part No.	Description
* 319	6-E	07A70516F01	Lever, Reel Bracket
☆ 319	6-E	07A70516F01	Lever, Reel Bracket
* 320	6-E	41A70517F01	Spring, Reel Bracket
☆ 320	6-E	41A70517F01	Spring, Reel Bracket
* 321	1-B	14A70013F01	Insulator, Cover Wire
☆ 321	1-B	14A70013F01	Insulator, Cover Wire
* 322	1-C	30T82140F01	Wire, Parallel 6P
☆ 322	1-C	30T82140F01	Wire, Parallel 6P
* 323	1-A	14A82701F01	Spacer, Motor
☆ 323	1-A	14A82701F01	Spacer, Motor
* 324	1-C	14S58462F11	Insulator, Cover
☆ 324	1-C	14S58462F11	Insulator, Cover
● 325	6-D	04A41345P01	Washer, Lock (M1.2)
○ 325	6-D	04A41345P01	Washer, Lock (M1.2)
■ 325	6-D	04A41345P01	Washer, Lock (M1.2)
□ 325	6-D	04A41345P01	Washer, Lock (M1.2)
▲ 325	6-D	04A41345P01	Washer, LoCK (M1.2)
△ 325	6-D	04A41345P01	Washer, Lock (M1.2)
★ 325	6-D	04A41345P01	Washer, Lock (M1.2)
※ 325	6-D	04A41345P01	Washer, Lock (M1.2)
◇ 325	6-D	04A41345P01	Washer, Lock (M1.2)
◆ 325	6-D	04A41345P01	Washer, Lock (M1.2)
◎ 325	6-D	04A41345P01	Washer, Lock (M1.2)
# 325	6-D	04A41345P01	Washer, Lock (M1.2)
* 325	6-D	04A41345P15	Washer, Lock (M1.2)
☆ 325	6-D	04A41345P15	Washer, Lock (M1.2)
● 326		04A41345P15	Washer, Lock (M1.2)
○ 326		04A41345P15	Washer, Lock (M1.2)
■ 326		04A41345P15	Washer, Lock (M1.2)
□ 326		04A41345P15	Washer, Lock (M1.2)
▲ 326		04A41345P15	Washer, Lock (M1.2)
△ 326		04A41345P15	Washer, Lock (M1.2)
★ 326		04A41345P15	Washer, Lock (M1.2)
※ 326		04A41345P15	Washer, Lock (M1.2)
◇ 326		04A41345P15	Washer, Lock (M1.2)
◆ 326		04A41345P15	Washer, Lock (M1.2)
◎ 326		04A41345P15	Washer, Lock (M1.2)
# 326		04A41345P15	Washer, Lock (M1.2)
* 326		04A41345P01	Washer, Lock (M1.2)
☆ 326		04A41345P01	Washer, Lock (M1.2)
● 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
○ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
■ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
□ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
▲ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
△ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
★ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
※ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
◇ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
◆ 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
◎ 327	5-F	03S68259F04	Screw, Pan (M1.7×6)
# 327	5-F	03S56479F09	Screw, Pan (M1.7×6)
* 327	5-F	03S68259F09	Screw, Pan (M2×6)
☆ 327	5-F	03S68259F09	Screw, Pan (M2×6)
● 328	5-B	03S44205G30	Screw, Pan (M2.6×4)

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

NOTE : The parts without part number are not supplied.

Symbol No.		Index	Part No.	Description		
○	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
■	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
□	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
▲	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
△	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
★	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
※	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
◇	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
◆	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
◎	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
#	328	5-B	03S44205G30	Screw, Pan (M2.6×4)		
⊕	329	3-E	03S40011G58	Screw, Pan (M2.6×3)		
◎	329	3-E	03S68259F01	Screw, Flat (M2.6×3)		
				Miscellaneous		
●	501	6-B	01V64100F96	Assy., Motor		
○	501	6-B	01V64100F96	Assy., Motor		
■	501	6-B	01V64100F96	Assy., Motor		
□	501	6-B	01V64100F96	Assy., Motor		
▲	501	6-B	01V64100F96	Assy., Motor		
△	501	6-B	01V64100F96	Assy., Motor		
★	501	6-B	01V64100F96	Assy., Motor		
※	501	6-B	01V71100F45	Assy., Motor		
◇	501	6-B	01V64100F96	Assy., Motor		
◆	501	6-B	01V64100F96	Assy., Motor		
◎	501	6-B	01V71800F20	Assy., Motor		
#	501	6-B	01V64100F96	Assy., Motor		
*	501	6-B	01V71800F20	Assy., Motor		
☆	501	6-B	01V71800F20	Assy., Motor		
●	502	1-B	01V64100F88	Assy., RF Motor		

Symbol No.		Index	Part No.	Description		
○	502	1-B	01V64100F88	Assy., RF Motor		
■	502	1-B	01V64100F88	Assy., RF Motor		
□	502	1-B	01V64100F88	Assy., RF Motor		
▲	502	1-B	01V64100F88	Assy., RF Motor		
△	502	1-B	01V64100F88	Assy., RF Motor		
★	502	1-B	01V64100F88	Assy., RF Motor		
※	502	1-B	01V64100F88	Assy., RF Motor		
◇	502	1-B	01V64100F88	Assy., RF Motor		
◆	502	1-B	01V64100F88	Assy., RF Motor		
◎	502	1-B	01V64100F88	Assy., RF Motor		
#	502	1-B	01V64100F88	Assy., RF Motor		
*	502	1-B	01V83500F82	Assy., RF Motor		
☆	502	1-B	01V83500F82	Assy., RF Motor		
●	503	3-B	88T74470F01	Assy., Head		
○	503	3-B	88T74470F01	Assy., Head		
■	503	3-B	88T74470F01	Assy., Head		
□	503	3-B	88T74470F01	Assy., Head		
▲	503	3-B	88T74470F01	Assy., Head		
△	503	3-B	88T74470F01	Assy., Head		
★	503	3-B	88T73824F01	Assy., Head		
※	503	3-B	88T68419F01	Assy., Head		
◇	503	3-B	88T74130F01	Assy., Head		
◆	503	3-B	88T74130F01	Assy., Head		
◎	503	3-B	88T71411F01	Assy., Head		
#	503	3-B	88T73824F01	Assy., Head		
*	503	3-B	88T73824F01	Assy., Head		
☆	503	3-B	88T74470F01	Assy., Head		
	504	2-D	01A63212F01	Assy., Play Solenoid		
	505	3-D	01A63213F01	Assy., Program Solenoid		
	506	5-G	01A63214F01	Assy., RF Solenoid		
	507	4-D	01A63215F01	Assy., Eject Solenoid		
	508	3-G	51T63433F01	Photo, Sensor		
	509	3-G	51T63433F01	Photo, Sensor		
	510	3-C	40T52216F01	Switch, Micro		
	511	2-D	40T63432F01	Switch, Slide		
	512	4-D	40T60329F02	Switch, Leaf		
●	513	5-F	40T60329F03	Switch, Leaf		
○	513	5-F	40T60329F03	Switch, Leaf		
■	513	5-F	40T60329F03	Switch, Leaf		
□	513	5-F	40T60329F03	Switch, Leaf		
▲	513	5-F	40T60329F03	Switch, Leaf		
△	513	5-F	40T60329F03	Switch, Leaf		
★	513	5-F	40T60329F03	Switch, Leaf		
※	513	5-F	40T60329F03	Switch, Leaf		
◇	513	5-F	40T60329F03	Switch, Leaf		
◆	513	5-F	40T60329F03	Switch, Leaf		
◎	513	5-F	40T60329F03	Switch, Leaf		
#	513	5-F	40T60329F03	Switch, Leaf		
*	513	5-F	40T71025F03	Switch, Detector		

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

NOTE : The parts without part number are not supplied.

Symbol No.		Index	Part No.	Description		
☆	513	5-F	40T71025F03	Switch, Detector		
●	514	5-F	40T41665F01	Switch, Slide		
○	514	5-F	40T41665F01	Switch, Slide		
■	514	5-F	40T41665F01	Switch, Slide		
□	514	5-F	40T41665F01	Switch, Slide		
▲	514	5-F	40T41665F01	Switch, Slide		
△	514	5-F	40T41665F01	Switch, Slide		
※	514	5-F	40T41665F01	Switch, Slide		
◇	514	5-F	40T41665F01	Switch, Slide		
◆	514	5-F	40T41665F01	Switch, Slide		
◎	514	5-F	40T41665F01	Switch, Slide		
#	514	5-F	40T41665F01	Switch, Slide		
*	514	5-G	40T71025F03	Switch, Detector		
☆	514	5-G	40T71025F03	Switch, Detector		
★	515	4-B	40T60329F02	Switch, Leaf		
◇	515	4-B	40T60329F02	Switch, Leaf		
◆	515	4-B	40T60329F02	Switch, Leaf		

Symbol No.		Index	Part No.	Description		

Note : ● : For GZ75E01A model only, ○ : For GZ75E02B model only, ■ : For GZ75E02C model only, □ : For GZ75E03B model only,
▲ : For GZ75E03C model only, △ : For GZ75E040 model only, ★ : For GZ75E06A model only, ※ : For GZ75E070 model only,
◇ : For GZ75E080 model only, ◆ : For GZ75E090 model only, ◎ : For GZ75E110 model only, # : For GZ75E120 model only,
* : For GZ75E230 model only, ☆ : For GZ75E23A model only, ⊕ : For except GZ75E110 model, Others : Common

Mechanical Parts Replacement

1. Motor Replacement

(1) Remove two screws marked " ○ " as shown in Figure 1.
(2) Remove the belt as shown in Figure 1.
(3) Remove wire leads from the motor terminal and the motor will be removed.
(4) Install a good motor, taking care not to damage gear teeth. To mount the motor perform the above steps in reverse order.
(5) After completion of the replacement, adjust the tape speed, using the test tape (MTT-111).

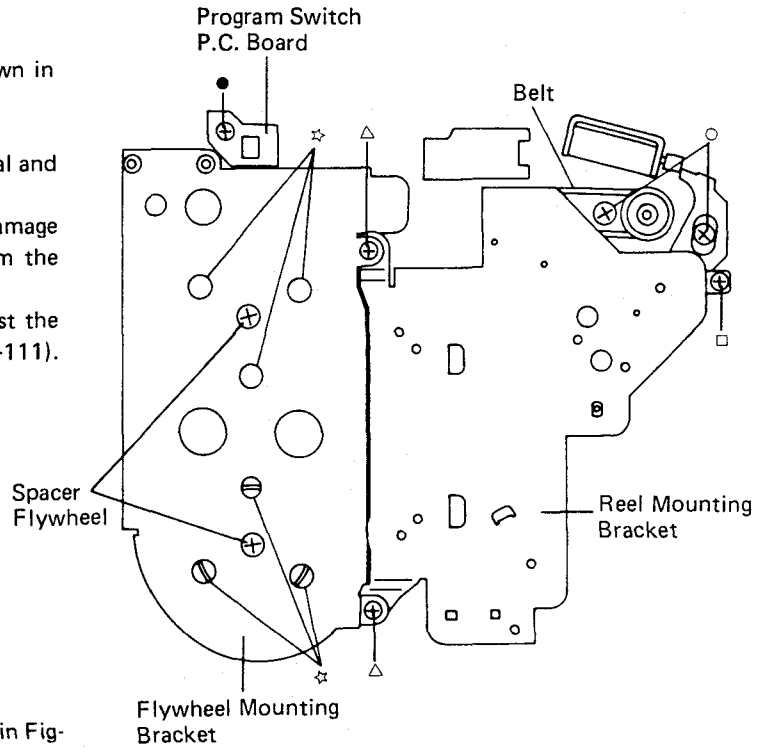


Figure 1

2. Belt Replacement

(1) Remove two screws marked " △ " as shown in Figure 1 and remove the flywheel mounting bracket.
(2) Clean a good belt with alcohol and thread the belt as shown in Figure 2. Assembly the unit, performing above steps in reverse order.

Notes: 1. Take care the belt is not stained with oil.
2. When tightening screws for the flywheel bracket, apply tightening torque of 4.5kg/cm.
3. When applying screw lock adhesive to the flywheel spacer, take care that the cross-recessed screw hole is free from the adhesive.

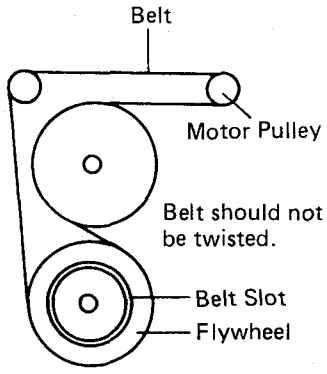


Figure 2

3. Control P.C. Board Replacement

(1) Desolder nine locations and one screw marked " ※ " as shown in Figure 3.
(2) Remove the flexible wire leads and wire leads connected to the P.C. Board, and the control P.C. Board will be removed.
(3) Replace the board with a good one and assembly the board, using above steps in reverse order.

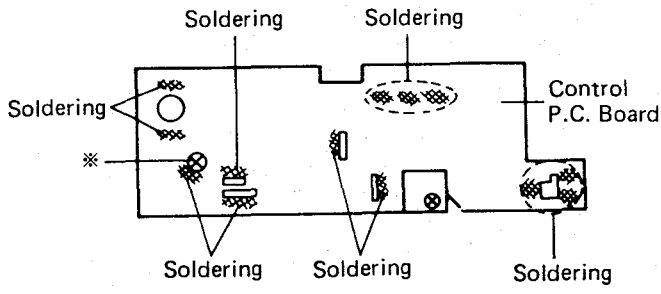


Figure 3

4. Program Switch P.C. Board Replacement

(1) First remove the control P.C. Board as mentioned above and then remove one screw marked " ● " as shown in Figure 1, and the program P.C. Board will be removed.

(2) Replace the board with a good one and assembly the board, using above steps in reverse order.

5. Replacement of Audio P.C. Board and Heads

(1) Desolder two locations as shown in Figure 4, and the audio P.C. Board will be removed.

(2) Remove the head flexible P.C. Board connected to the audio P.C. Board.

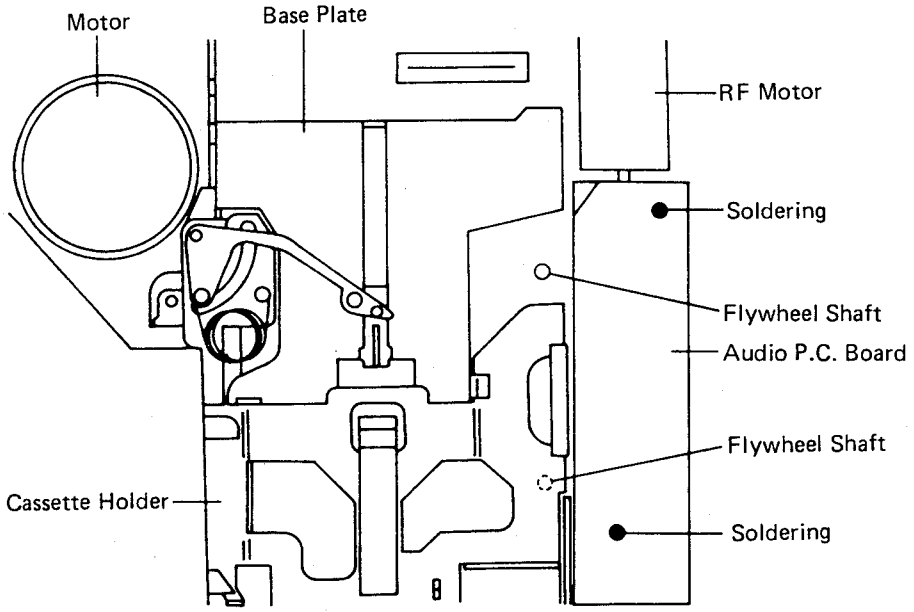


Figure 4

(3) Remove two screws marked " ▲ " as shown in Figure 5, and remove the guide holder.

(4) Remove one washer as shown in Figure 6, and remove the cassette holder and the base plate.

(5) Remove two screws marked " ■ " as shown in Figure 7 and the head flexible P.C. Board will be removed. (In this case take care not to miss the spacer and the coil spring.)

(6) Remove the head from the P.C. Board.

(7) Replace the head with a good one and mount the head with two screws marked " ■ " as shown in Figure 7. (In this case, insert the spacer to the fixed side screw and the coil spring to the azimuth adjustment side screw.)

Note: Since the flexible P.C. Board is apt to be damaged, handle it with sufficient care.

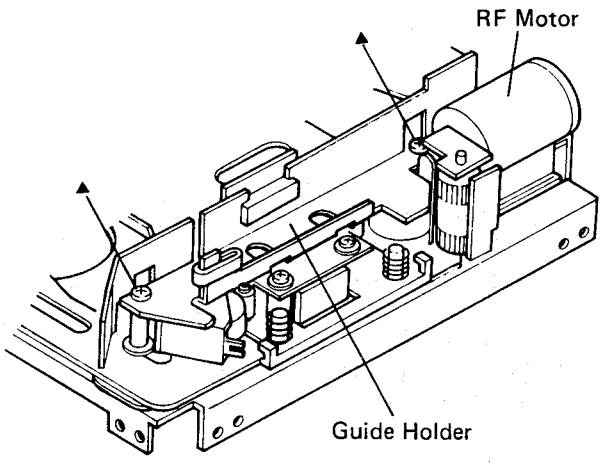


Figure 5

(8) Perform the head height adjustment.
   1) Place the height adjustment gauge (M-300 or AI-500) on the head base as shown in Figures 8, 9 and 10, and adjust the gauge height so that the check bar can enter the tape head guide smoothly.
   2) When the check bar touches top or bottom guide of the tape guide, insert a spacer (of 0.1mm thickness or a polyslider washer of 0.13mm in thickness). (Or remove the spacer to adjust the height.)

(9) After mounting the head, reassembly using the above steps in reverse order.

(10) Next, adjust head azimuth, using the test tape (MTT-113C).
(Refer to the "Head Azimuth Adjustment".)
After completion of the adjustment apply screw lock adhesive to the adjusting screw. In this case, take care so that the adhesive does not stain the pinch roller.

> **Note:** As shown in Figure 9, if the height gauge is not available, run a tape as usual and adjust the height (head and small guide window) so that no tape curling is observed.

6. Pinch Roller Replacement

(1) Remove the control P.C. Board and guide holder, and then the RF motor will be removed.

(2) Remove two E-rings securing the pinch roller as shown in Figure 7, and the pinch roller will be removed.

(3) Replace the pinch roller with a good one, clean the pinch roller with alcohol, and then assembly it, using the above steps in reverse order.

(4) After assembling, make sure performance of tape speed and wow-flutter, using the test tape (MTT-111).

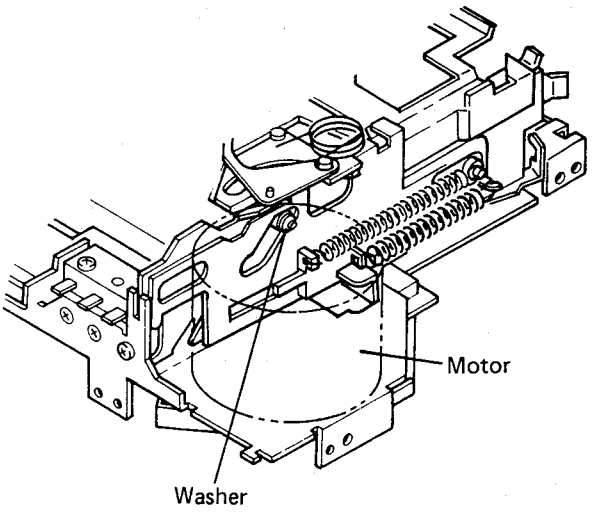


Figure 6

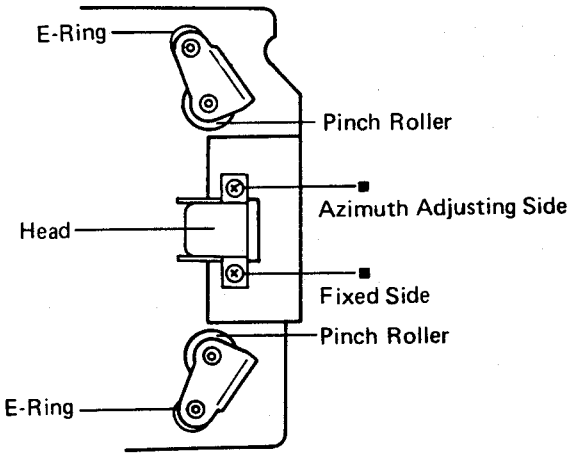


Figure 7

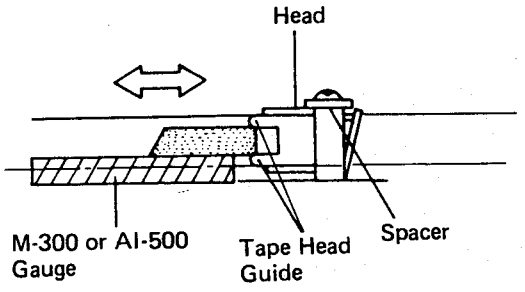


Figure 9

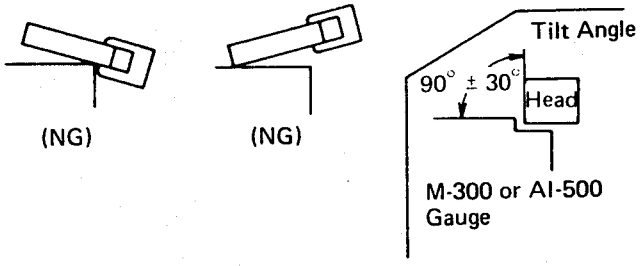


Figure 8

7. Flywheel Replacement

(1) Remove the flywheel mounting bracket and the belt.

(2) Remove the flywheel by moving it straight up. (In this case, a washer on opposite chassis will also be removed together, so taking care not to miss the washer.)

(3) Mount a good flywheel. (In this case also insert the flywheel washer and apply a drop of "moble 1" oil.)

(4) Mount the belt and the flywheel mounting bracket.
Make sure flywheel's thrust clearance by pushing tip of the flywheel shaft as shown in Figure 1 and by pushing the flywheel through the opening on the flywheel mounting bracket marked " ☆ " in Figure 1.
Turn the spacer flywheel until the thrust clearance becomes minimum and then fix the spacer with screw adhesive lock.

(5) Finally, mount the oil shield washer to the shaft.

(6) After assembling, make sure the tape speed and wow-flutter, using a test tape (MTT-111).

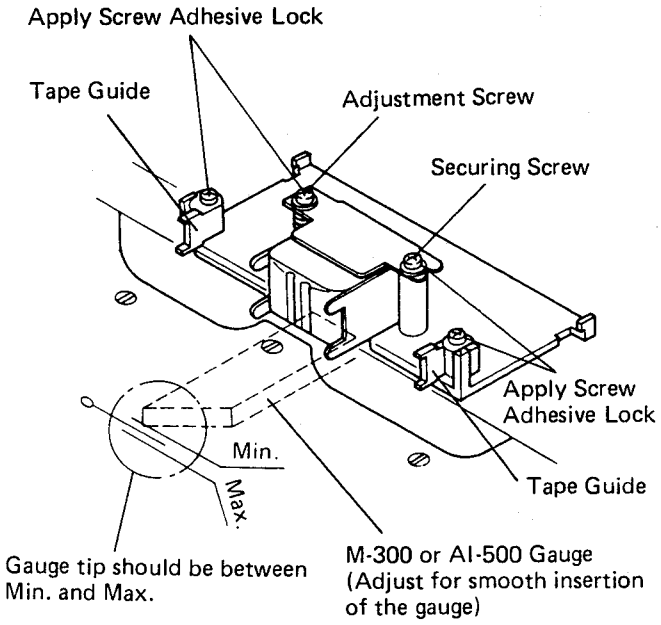


Figure 10

8. Replacement of Reverse P.C. Board and Reels

(1) Remove two flywheels.

(2) Remove one screw marked " □ " as shown in Figure 1 and remove the flexible wire leads mounted on the P.C. Board.

(3) Remove two lock washers as shown in Figure 11 and the two reels will be removed.

(4) After removal of the reels, desolder two locations as shown in Figure 11 and remove two screws marked " # " and one lock washer. Desolder leads from the RF solenoid as shown in Figure 11.

(5) Replace with good reel(s) and/or reverse P.C. Board.
Assembly them using above steps in reverse order.

(6) After the replacement, make sure the tape speed and wow-flutter, using a test tape (MTT-111).

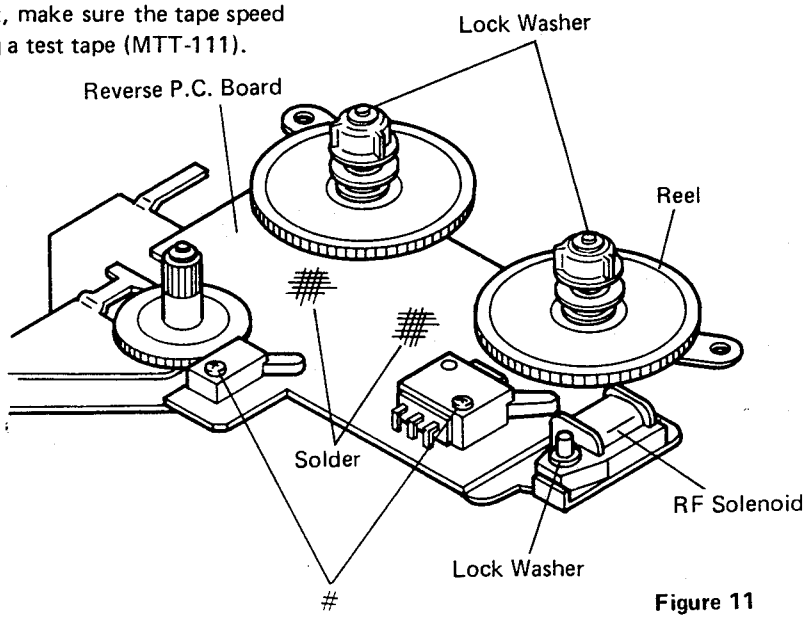


Figure 11

GZ DECK DISASSEMBLING DIAGRAM

- **Disassembling and assembling methods of the cassette holder and the base plate.**

Assembling Procedures

1. Mount the switch lever Ⓐ.
2. Mount the micro switch Ⓑ and fix it with screw Ⓒ.
3. Mount the cassette holder assembly Ⓔ on the base plate assembly Ⓓ.
4. Mount the eject frame assembly Ⓕ.
5. Mount them on the chassis.
6. Place the chassis vertically and fix with screws Ⓖ and Ⓗ.

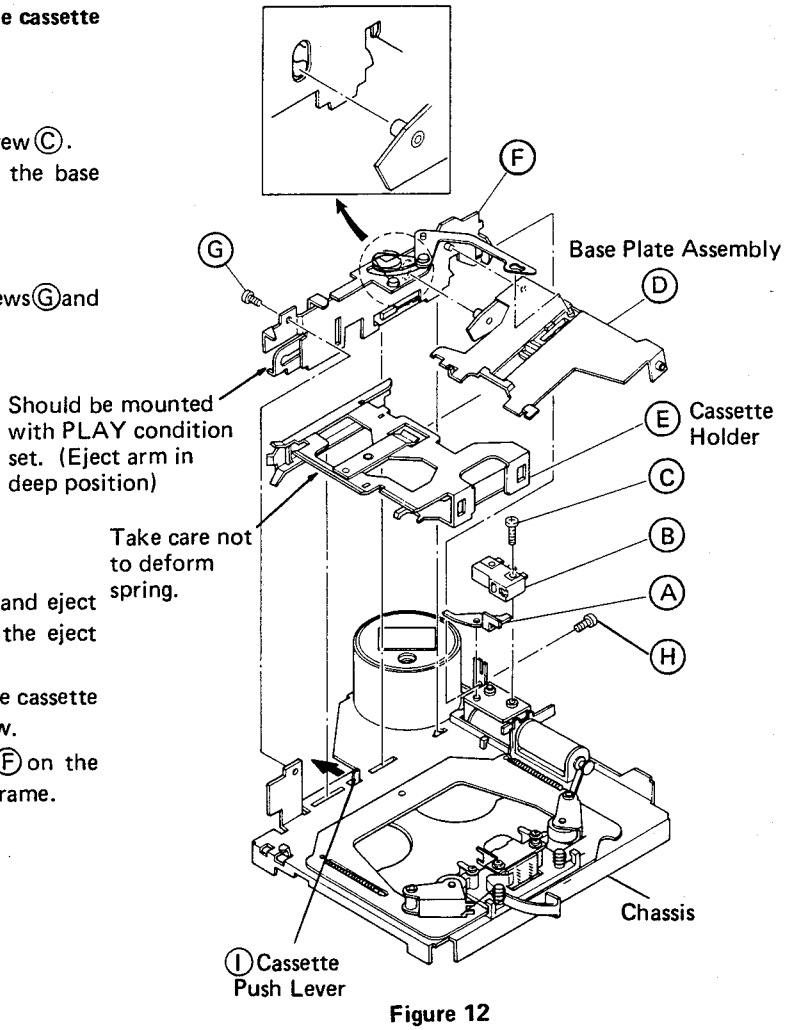


Figure 12

CAUTIONS:

1. When mounting the base plate assembly Ⓓ and eject frame assembly Ⓔ, take care not to bend the eject arm.
2. When installing frame assembly Ⓕ, press the cassette push lever Ⓘ in direction shown by the arrow.
3. When mounting the eject frame assembly Ⓕ on the chassis, do not apply excessive force to the frame.

Under cassette-in condition, insert the slider shaft Ⓙ into the eject arm Ⓚ, and mount it as illustrated by rotating it in direction shown by the arrow. (Figure 13)

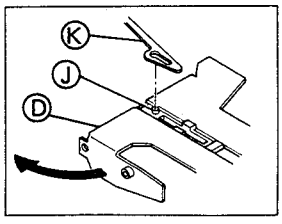


Figure 13

1 Head Base Assembly

① Head frame
② Head assembly
③ Screw, F-Lock
④ Head spring
⑤ Tape guide spring
⑥ Tape guide
⑦ Shim (option)
For head height adjustment

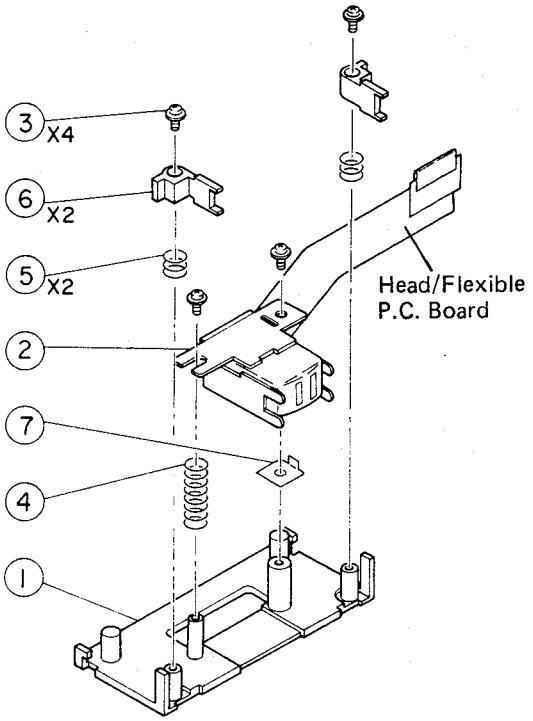


Figure 14

2 Pinch Roller Assembly

① Pinch roller assembly
② Pinch roller assembly
③ E-ring
④ Pinch roller spring
⑤ Pinch roller spring
⑥ Head base spring

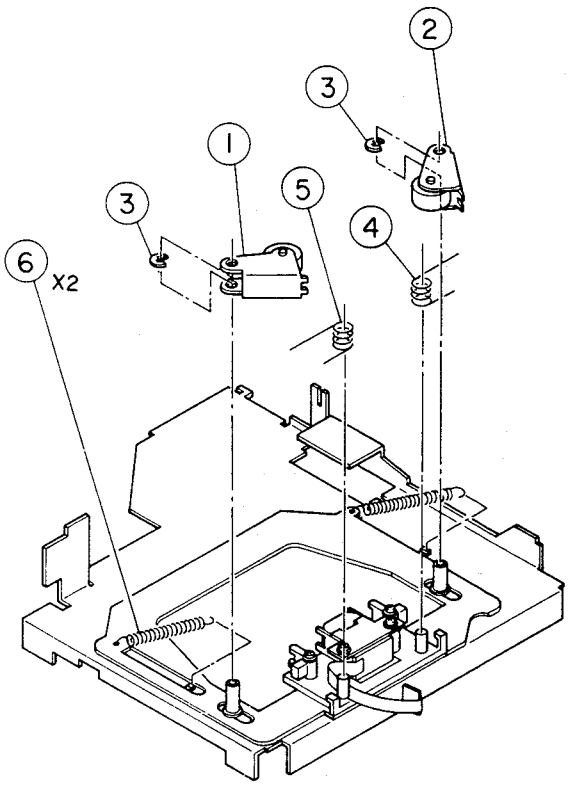


Figure 15

3 Photo-transistor Mounting

① Reverse P.C. Board
② Resistor, 20K ohm 1/6W
④ Photo-transistor
(Take care for mounting direction.)
⑤ Washer (t = 0.13mm)

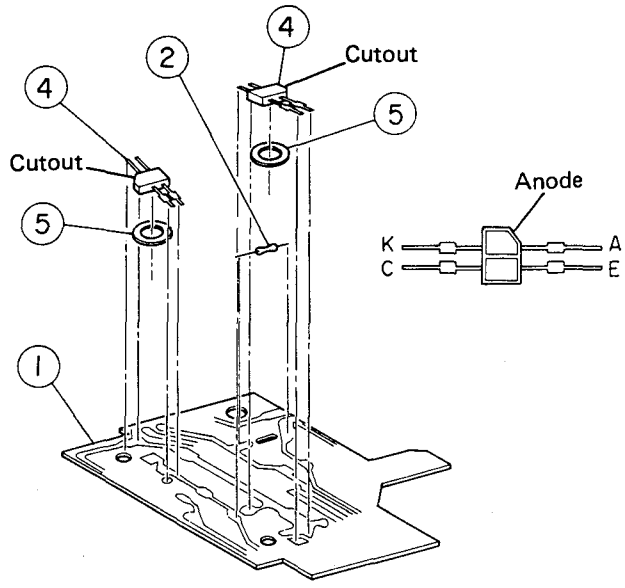


Figure 16

4 R/F Frame Mounting

① R/F frame
⑤ Washer
⑥ Gear, R/F (B)
⑦ R/F gear assembly
⑧ Washer
⑨ R/F motor assembly
⑩ Screw

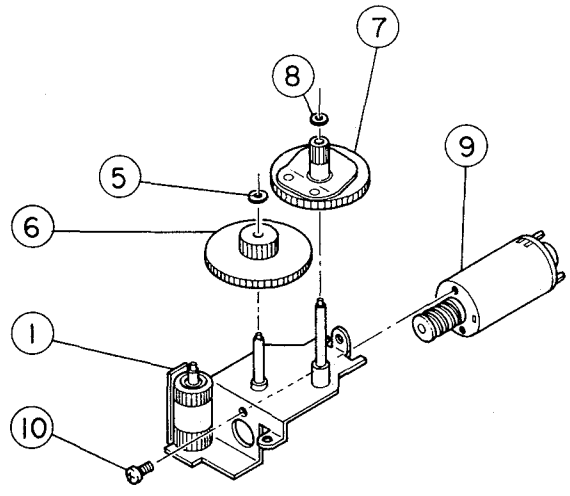


Figure 17

ALPINE ELECTRONICS INC.
Tokyo Office: 1-1-8 Nishi Gotanda,
Shinagawa-ku, Tokyo, Japan 141
Phone 03-494-1101 Telex 8927-61

ALPINE ELECTRONICS OF AMERICA, INC.
19145 Gramercy Place
Torrance, California 90501
Phone 213-326-8000

ALPINE ELECTRONICS OF CANADA, INC.
605 Alden RD. Markham,
Ontario L3R 3L5 Canada
Phone 416-475-7280 Telex 06-986789

ALPINE ELECTRONICS GmbH
Münsterstr. 330 D-4000 Düsseldorf
F.R. Germany
Tel. 0211-626806 Telex 8588 296 ALPI D

3/87-S
68P80518F02
Printed in Japan